

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE EASTERN DISTRICT OF TEXAS
3 MARSHALL DIVISION
4 INTELLECTUAL VENTURES I LLC,) (
5 PLAINTIFF) (CIVIL ACTION NO.
6 VS.) (2:17-CV-577-JRG
7) (MARSHALL, TEXAS
8 T-MOBILE USA, INC., T-MOBILE) (
9 US, INC., ERICSSON INC., AND) (
10 TELEFONAKTIEBOLAGET LM) (
11 ERICSSON,) (FEBRUARY 5, 2019
12 DEFENDANTS) (12:45 P.M.

13 TRANSCRIPT OF JURY TRIAL

14 BEFORE THE HONORABLE JUDGE RODNEY GILSTRAP

15 | UNITED STATES CHIEF DISTRICT JUDGE

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1 P R O C E E D I N G S

2 COURT SECURITY OFFICER: All rise.

3 THE COURT: Be seated, please.

4 Are Defendants prepared to proceed with
5 cross-examination of the witness?

6 MR. KUBEHL: We are, Your Honor.

7 THE COURT: All right. You may go to the podium,
8 Mr. Kubehl.

9 And let's bring in the jury, please.

10 COURT SECURITY OFFICER: All rise.

11 (Jury in.)

12 MR. KUBEHL: Your Honor, may I approach with
13 witness notebooks?

14 THE COURT: You may.

15 (Jury in.)

16 THE COURT: Please be seated.

17 MR. KUBEHL: May I hand the witness the notebook?

18 THE COURT: If you'll hand it to the Court
19 Security Officer, she'll deliver it to the witness.

20 MR. KUBEHL: Thank you, Your Honor.

21 THE COURT: All right. Ladies and gentlemen, we
22 will proceed with cross-examination of Dr. Tim Williams by
23 the Defendants.

24 Counsel, you may proceed.

25 TIM WILLIAMS, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

CROSS-EXAMINATION

2 BY MR. KUBEHL:

3 Q. Good afternoon, Dr. Williams.

4 A. Good afternoon.

5 Q. Dr. Williams, you did not review any source code for
6 the accused Ericsson base stations; is that correct?

7 A. That's correct.

8 Q. And as far as the source code goes, you relied on
9 Dr. Chrissan's report for that, correct?

10 A. Yes, and my questions of him.

11 Q. The first time that you saw Dr. Chrissan's source code
12 report was early October, correct?

13 A. Yes.

14 Q. And that was a matter of days before you signed your
15 expert report, correct?

16 A. That's correct.

17 Q. Is it fair to say that you defer to Dr. Chrissan on how
18 the Ericsson base station actually is operating at the
19 source code level?

20 A. Yes, that's correct.

21 Q. You didn't review any source code on any mobile phones,
22 did you?

23 A. No, I did not.

24 Q. And you're not aware of anyone else in this case who's
25 looked at any source code on mobile phones; is that right?

1 A. I have not seen any, no.

2 Q. You've not expressed any theory of infringement based
3 on a mobile phone, correct?

4 A. Correct.

5 Q. And you're not contending that any LTE phone practices
6 any of the patents in this case, correct?

7 A. Correct. I'm sorry, could you speak up? It's hard to
8 hear you.

9 Q. Sure. Let me move the mic.

10 A. Thank you.

11 Q. Is that better for you?

12 A. Perfect.

13 Q. Dr. Williams, you rely on something called QCI as the
14 thing that would establish the parameters that you say are
15 end-user quality of service requirements; is that right?

16 A. Yes.

17 Q. And you agree that the assignment of QCI values allows
18 network operators, like T-Mobile, to decide how they want
19 to discriminate between different IP-flows?

20 A. Basically, yes.

21 Q. And you understand that T-Mobile pre-configures the
22 nodes in its network to operate with a particular QoS
23 parameter that T-Mobile has chosen, right?

24 A. Yes.

25 Q. It's T-Mobile, not the end-users, that decide which QoS

1 parameters will be configured on Ericsson base stations,
2 right?

3 A. Yes.

4 Q. And it's T-Mobile, not the end-users, that decide what
5 quality of service parameters will be associated with which
6 bearers, right?

7 A. Yes.

8 MR. KUBEHL: Could we have Dr. Williams' Slide
9 No. 48, please?

10 Q. (By Mr. Kubehl) Dr. Williams, the slides that you
11 presented to the jury this morning, did you have some
12 involvement in put -- in putting them together?

13 A. I did.

14 Q. And so this would have been one of the slides that you
15 put together or helped put together?

16 A. It is.

17 Q. Okay. And this is showing a doc -- source material
18 from a T-Mobile document; is that right?

19 A. From three different documents --

20 Q. Okay.

21 A. -- yes.

22 Q. But it's showing that -- choices that T-Mobile has made
23 with respect to quality of service, correct?

24 A. That's correct.

25 Q. T-Mobile has chosen that it will give conversational

1 voice a QCI of 1 and have its associated parameters, right?

2 A. Yes.

3 Q. And T-Mobile has decided that it will give data for

4 T-Mobile-branded customers a QCI of 6 and its associated

5 parameters, right?

6 A. That's correct.

7 Q. And T-Mobile, and not the end-users, have decided that

8 they'll give data for other branded customers a QCI of 7,

9 correct?

10 A. Yes.

11 Q. And then T-Mobile and not any end-users have set the

12 requirements for the data network for extreme user traffic

13 at QCI of 9; is that right?

14 A. Yes.

15 MR. KUBEHL: Could we have Williams 49, please?

16 Slide No. 49 from that same deck.

17 I could use the ELMO. Oh, there we go.

18 Q. (By Mr. Kubehl) Is this another one of the slides that

19 you helped create?

20 A. It is.

21 Q. And this is one that you decided not to show to the

22 jury today?

23 A. I believe this was in the deck, yes.

24 Q. Okay. We can -- we can do a comparison later, but --

25 and I apologize if I'm wrong. I don't -- I don't remember

1 seeing this.

2 THE COURT: Let's ask questions. Let's don't have
3 a conversation.

4 Q. (By Mr. Kubehl) Dr. Williams, this illustrates that --
5 this document illustrates that T-Mobile has its own QoS
6 requirements to map QCI 6 to T-Mobile-branded phones,
7 right?

8 A. Yes.

9 Q. And it shows that T-Mobile has its own
10 network-established QoS requirements for second brand
11 users, correct?

12 A. Yes.

13 Q. And it shows that T-Mobile has its own network QoS
14 requirements for extreme user traffic, correct?

15 A. Yes.

16 Q. Now, extreme user traffic, I think it's been discussed
17 a little bit. If -- if I'm an extreme downloader on the
18 T -- T-Mobile network, even though my traffic ordinarily
19 might have a QCI of 6 -- because I've downloaded so much,
20 QCI might reduce me to a QCI 9.

21 May I rephrase the question? I had too many QCI's
22 in there.

23 THE COURT: Just withdraw your question and
24 restate it.

25 MR. KUBEHL: Withdrawn.

1 Q. (By Mr. Kubehl) Is it accurate that -- so T-Mobile
2 users' normal traffic can have a QCI level of 6, according
3 to this document?

4 A. Is that a question?

5 Q. Yes, it is, sir.

6 A. I don't understand the question.

7 Q. Sure. Do you understand that T-Mobile can associate a
8 QCI 6 with its normal T-Mobile-branded user traffic?

9 A. Yes.

10 Q. And T-Mobile can decide that it's going to move that
11 traffic down, down in priority to a QCI of 9 if that user
12 has been using too much data?

13 A. Yes, that's my understanding.

14 Q. And that's one way that T-Mobile protects other
15 subscribers from having their services degraded, correct?

16 A. I don't know that.

17 Q. In any case, T-Mobile made that decision, right?

18 A. That's my understanding, yes.

19 Q. No end-user gets to set those requirements, right?

20 A. That's my understanding, yes.

21 Q. Presumably, the end-user who is downloading all that
22 data would like to still be at a QCI 6, right?

23 A. I don't know what the end-user wants, so I can't answer
24 for them that question.

25 Q. Well, if you've got data plan, do you want it as fast

1 as it can be?

2 A. I don't know.

3 Q. You're -- let's say you're a T-Mobile user, and you're
4 in this plan that's giving you a QCI 6, and it's operating
5 at a particular speed, would -- would it be your desire
6 that that speed get slower?

7 A. You're asking me to theorize about the desires of the
8 user? I don't understand your question.

9 Q. Are you a user of cell phones?

10 A. Yes.

11 Q. Okay. When you're using your phone and it's operating
12 at a particular speed, is it your desire that that phone
13 have less performance than what you're experiencing right
14 now?

15 A. If I'm overusing the network, I would expect the
16 network to degrade my service because I'm taking more --
17 more than my fair share.

18 Q. And so would you require the network to do that to you?

19 A. I don't know how to answer that question.

20 Q. So as an end-user and you're on your phone and you're
21 using it more than other people are generally using it, are
22 you saying that it would be your QoS requirement that the
23 T-Mobile network must slow you down?

24 A. I haven't expressed an opinion like that.

25 Q. T-Mobile uses its own network QoS requirements, not

1 end-user QoS requirements, correct?

2 A. Yes.

3 Q. Okay.

4 MR. KUBEHL: I'm going to ask to pull up a couple
5 of slides from Dr. Williams's presentation, starting with
6 No. 54.

7 Q. (By Mr. Kubehl) Dr. Williams, is this one of the
8 slides you put together?

9 A. It is.

10 Q. And this is in the context of -- I think it was the
11 '517 patent, but you're talking about it in terms of how
12 LTE works; is that fair?

13 A. Yes.

14 Q. And you're showing this multi-colored grid. And is
15 that showing a time frequency grid?

16 A. It can, yes.

17 Q. Well, what are you intending to depict here?

18 A. The resources available for the transmission of
19 information from the base station to the mobile --

20 Q. And what --

21 A. -- and vice versa.

22 Q. Is this a single slot? Is it a time resource grid?
23 What are we looking at here?

24 A. It's an abstract representation of limited resources.

25 Q. All right.

1 MR. KUBEHL: Could we have your Slide 25, please?

2 Q. (By Mr. Kubehl) Is this a time frequency grid?

3 A. Yes.

4 Q. Can you explain to the jury how this works?

5 A. As I said before, time and frequency are two dimensions
6 by which we can provide resources for transmission from the
7 transmitter to the receiver. And this shows a block of
8 data that can be moved between the transmitter to the
9 receiver.

10 Q. So if we were to liken this to the Jorgensen patents,
11 would Jorgensen consider, for example, this -- would he --
12 how that would correspond to what Mr. Jorgensen has in his
13 patent? Would that be a FRAND?

14 A. Could be.

15 Q. So each of the blocks we're seeing there is a slot in
16 what I circled?

17 A. We have to be careful about the use of the word slot.
18 So I don't quite understand your question.

19 Q. I -- I understand why you wouldn't.

20 The word slot, as it's used in the Jorgensen
21 patents -- let's use it that way -- would it be your
22 contention that each of the blocks that I've circled here
23 is a slot in one frame?

24 A. No. I've not told the jury that.

25 Q. Okay. If we were to compare this to what Mr. Jorgensen

1 showed in his patent, Mr. Jorgensen doesn't have any
2 concept of this frequency division of resources like you've
3 shown here, does he?

4 A. Potentially.

5 Q. In his figures -- in his figures, he doesn't show that,
6 right? He shows that each figure is made up of slots all
7 at the same frequency, correct?

8 A. One could understand that what he's describing includes
9 frequency.

10 Q. Okay. But his Figure 14, for example, in this patent
11 that you showed the jury, it doesn't show this, does it?

12 A. In my opinion, it does, yes.

13 Q. Okay.

14 MR. KUBEHL: Slide 20 --

15 Q. (By Mr. Kubehl) So just so we're clear, then, this is
16 the way LTE would work, right?

17 A. It's an abstraction of how LTE actually works, yes.

18 Q. And it has one dimension of --

19 A. It has a fair representation --

20 THE COURT: Wait a minute. Let's make sure we
21 talk one at a time. And it's important for each of you to
22 be sure the other one is finished before you start talking.

23 Go ahead and finish your answer, Dr. Williams, and
24 then we'll move on to the next question.

25 A. I believe I was saying it's a fair representation of

1 the types of resources available to LTE.

2 MR. KUBEHL: Could we have Exhibit 1, Figure 14?

3 Q. (By Mr. Kubehl) Okay. Can you show us here where time
4 is represented -- I'm sorry. Withdrawn.

5 Can you show us here where different frequencies
6 are represented at the same time?

7 A. So back in Jorgensen's day, you could -- in systems
8 that were developed, you could transmit a single frame on a
9 single frequency at a single time.

10 However, in this diagram, one of ordinary skill in
11 the art would understand that because of technology that's
12 been developed in the last -- in the last 20 years, it's
13 possible to put this frame on one frequency, this frame on
14 a second frequency, this frame on a third frequency, this
15 frame on a fourth frequency, et cetera, and transmit them
16 all in the same time.

17 Q. Okay. Would you agree with me that what's actually
18 shown by Dr. Jorgensen here is that in this dimension,
19 that's time?

20 A. No, I would not.

21 Q. Would you agree that in this dimension, it's time?

22 A. Yes, I would.

23 Q. Okay. And so when Dr. Jorgensen called this frame N,
24 the current frame, and the next one a future frame, is it
25 your testimony to the jury that he's not talking about time

1 there?

2 A. It's my testimony that technology that's been developed
3 in the last 20 years allows you to send multiple frames at
4 the same time.

5 Q. Okay.

6 A. And so you have multiple -- you have time and frequency
7 resource. So one of ordinary skill in the art would
8 consider this as a grid of time and frequency --

9 Q. I'm --

10 A. -- as a disclosure.

11 Q. Have you finished?

12 A. Yes, I have.

13 Q. Okay.

14 MR. KUBEHL: I'll respectfully object as
15 nonresponsive.

16 THE COURT: Sustained.

17 Q. (By Mr. Kubehl) Dr. Williams, what -- what
18 Dr. Jorgenson actually showed in the diagram was that each
19 of these rows corresponds to a frame in time, starting with
20 N, going to N + 1, and all the way down to N + X; is that
21 right?

22 A. We would have to look at the description, but I believe
23 that has the possibility of being correct.

24 Q. So you -- is it your testimony that you're not sure on
25 this figure whether N, N + 1, N + 2 is corresponding to

1 time orders of frames?

2 A. No.

3 Q. I'm not sure if that was a no to the question or --

4 it's -- that's not your testimony?

5 A. Please ask your question again.

6 Q. Sure. Can you agree with me that Dr. Jorgensen is
7 showing here that Frame N is one frame in time, Frame N + 1
8 is a future frame in time, N + 2 is a future frame in time?

9 A. No, I do not agree.

10 Q. All right.

11 MR. KUBEHL: Could I have --

12 Q. (By Mr. Kubehl) And just for the -- just for the
13 purposes of this question, let's assume that -- I'm
14 terrible at this -- let's assume that this is time on this
15 vertical axis, and this is time on this horizontal axis.

16 Can you do that for the sake of this question?

17 A. Yes.

18 Q. All right.

19 MR. KUBEHL: And if we can have Williams 25 back.

20 Q. (By Mr. Kubehl) And this is what you showed as
21 representing how LTE works, right?

22 A. Yes.

23 Q. And this has time, but then over here, it's not time;
24 it's frequency, right?

25 A. Correct.

1 Q. That's different, right?

2 A. Correct.

3 Q. Okay. And that was -- that's how LTE works.

4 MR. KUBEHL: Could I have Slide No. 22? Let's --
5 let's...

6 Q. (By Mr. Kubehl) Is this exactly the same block grid
7 that you showed in terms of how LTE works?

8 A. Yes.

9 Q. Okay. And did you ask the jury to understand that that
10 was actually in Mr. Jorgensen's patent; that was his
11 invention and what -- what he showed in his patent?

12 A. No.

13 Q. So you'd agree he doesn't show this in his patent?

14 A. No.

15 Q. All right. What you're showing here is that multiple
16 phones can get access to the same time frame; is that
17 right?

18 A. I think I understand your question.

19 Q. Sure. Let me -- let's --

20 A. The answer would be yes.

21 Q. Okay. So in LTE, you can have more than one phone that
22 can be assigned to a particular slot, as Dr. Jorgensen
23 would call it, right?

24 A. Yes.

25 Q. And the '629 patent does require reserving a slot for a

1 particular stream, correct?

2 A. (No response.)

3 THE COURT: Did you hear the question,

4 Dr. Williams?

5 THE WITNESS: Yes. I'm sorry. I'm looking at the
6 '69 [sic] patent.

7 A. Could I have the question again, please?

8 Q. (By Mr. Kubehl) The '629 patent claims do require
9 reserving a slot for a particular packet; is that right?

10 A. For two packets, yes.

11 Q. There are two claim elements that talk about reserving,
12 right?

13 A. Yes. A first slot for a first data packet and a second
14 slot for a second data packet.

15 Q. Correct. The first slot must be reserved for the first
16 packet, right?

17 A. Yes.

18 Q. And the second slot must be reserved for the second
19 packet, correct?

20 A. Yes.

21 Q. And in LTE, more than one phone can use the same slot
22 at the same time, correct?

23 A. Yes.

24 Q. Dr. Williams, in the accused Ericsson base station, the
25 uplink and the downlink schedulers are configured to

1 perform what's called dynamic scheduling; is that right?

2 A. Yes.

3 Q. And in these dynamic uplink and downlink schedulers,
4 there's a dynamic resource grant that's issued that
5 specifies the resources that the phone is allowed to use
6 for just one slot, as Dr. Jorgensen would use that term; is
7 that right?

8 A. Basically, yes.

9 Q. So for each slot, the accused Ericsson uplink scheduler
10 holds a scheduling competition for receiving the uplink
11 grant of resources, correct?

12 A. That's correct.

13 Q. And the term "scheduling competition," that's a term
14 that you used in your own expert report, correct?

15 A. Absolutely.

16 Q. And you weren't responding to anyone's argument --

17 A. No, those are my words.

18 Q. You chose those words to describe the Ericsson uplink
19 scheduler, right?

20 A. Yes.

21 Q. So when the Ericsson uplink scheduler gives a grant for
22 a phone to give it permission to transmit, that grant is
23 good for one and only one slot, right?

24 A. Yes.

25 Q. It is not good out into the future, is it?

1 A. I don't understand the question.

2 Q. The grant that's given by the uplink scheduler is not
3 good for any future slots, just the one slot, correct?

4 A. Yes.

5 MR. KUBEHL: Could we have Slide 26, please? And
6 this is --

7 Q. (By Mr. Kubehl) This isn't the same slide, but this is
8 the same drawing that you showed the jury during your
9 direct, correct?

10 A. Yes.

11 Q. And you created this -- this drawing based on a drawing
12 that Dr. Chrissan had done, correct?

13 A. Yes, and my questions of Dr. Chrissan and my
14 understanding of the results, yes.

15 MR. KUBEHL: So if we go to the next slide,
16 please.

17 Q. (By Mr. Kubehl) This is the original drawing that
18 Dr. Chrissan did, right?

19 A. That looks like it, yes.

20 Q. He's the guy who analyzed the source code, right?

21 A. He is.

22 Q. And do you think he understood how the Ericsson source
23 code worked?

24 A. Yes.

25 Q. Okay. What you did is you took his drawing -- and if

1 you go back a slide, you added these indications of
2 reserve; is that right?

3 A. Yes. And as well as other notations, yes.

4 Q. Okay. But those -- those two indications of Reserve 3
5 and Reserve 4, those are not anything that Dr. Chrissan had
6 identified. You added those to the drawings, correct?

7 A. Yes. This is my opinion.

8 Q. Now, I think you had the claim in front of you before
9 for the '629 patent. That's the future slot reservation
10 patent. And there are two reservations that have to be
11 made in that claim, right?

12 A. Yes.

13 Q. You have to reserve a first slot, and you have to
14 reserve a second slot, and those have to be in particular
15 future frames, correct?

16 A. They have to have a relationship to each other,
17 correct.

18 Q. Now, the Reserve 3 on this diagram, is that what you
19 would say corresponds to Claim Step 1(b)?

20 A. Yes.

21 Q. That's the reserving of the first one?

22 A. Yes.

23 Q. And then Reserve 4, is that what you would say would
24 correspond to Element 1(c)?

25 A. Yes.

1 Q. And that's the reservation in the second slot?

2 A. Yes.

3 Q. And the -- withdrawn.

4 So looking at Reserve 4, this -- this
5 identification you've made of where you believe a
6 reservation could be made with respect to Step 1(c), that
7 reservation is made at Time 81 milliseconds, correct?

8 A. Yes. I testified in my deposition that the reservation
9 is made and complete at that point in time.

10 MR. KUBEHL: And so if we go to the next slide.

11 Q. (By Mr. Kubehl) Have I indicated correctly on this
12 slide where on this slide the reservation would be --

13 MR. BLACK: Objection, Your Honor. Improper
14 impeachment.

15 THE COURT: Overruled at this point. I'll let him
16 continue.

17 Q. (By Mr. Kubehl) Have I indicated correctly on this
18 slide where on this timeline you contend the reservation
19 would be made for Claim Step 1(c)?

20 A. As I just testified, in my deposition, I said it --
21 that the reservation was made and complete at 81.

22 Q. Thank you, sir.

23 Now, the -- the packet that ends at -- ends up
24 getting put into the -- what you would consider the reserve
25 frame is which one?

1 A. I don't understand your question.

2 Q. Sure. If we look just to the right of the blue line
3 pointing down that you identified as where the reservation
4 is made, the blue line pointing up next to that, is that
5 the slot that you believe has been reserved?

6 A. The -- what's shown in the -- in the darker blue is the
7 transport of the actual speech packets between the cell
8 phone and the base station.

9 Q. And that would be happening in the slot that under your
10 theory would have been reserved in Step C; is that correct?

11 A. That slot -- that slot is directed -- the base station
12 directs specifically the phone to transmit at that point in
13 time. So I don't understand your question in terms of the
14 terminology that you're using.

15 Q. Okay. Let me try again.

16 You believe that a reservation is made according
17 to this Reserve 4, correct?

18 A. Yes.

19 Q. And so you --

20 A. The reservation begins at the point in time where the
21 mark is made at 81 --

22 MR. KUBEHL: Object as nonresponsive.

23 A. -- and is complete at 81.

24 MR. KUBEHL: I'm sorry for interrupting.

25 THE COURT: Sustained. The witness answered yes.

1 The portion thereafter is nonresponsive.

2 Try to limit your answers to the questions asked,
3 Dr. Williams.

4 Mr. Black is going to get an opportunity to ask
5 more questions when Mr. Kubehl passes the witness.

6 Proceed -- and continue to try harder to not talk
7 over each other, please.

8 MR. KUBEHL: Yes, sir.

9 THE COURT: All right. Let's go forward.

10 Q. (By Mr. Kubehl) So tell the jury, if you would, which
11 is the -- where is the slot in time -- on this timeline,
12 where is the slot that you believe has been reserved as a
13 result of that reservation at 81?

14 A. At 81.

15 Q. Okay. And you'd agree that's not a slot in a future
16 frame, correct?

17 A. I don't understand your question.

18 Q. You would agree that the slot that has been reserved
19 under your theory is not a slot in a future frame compared
20 to Time 81; is that fair?

21 A. No.

22 Q. The slot that you believe has been reserved is at
23 time 81, correct?

24 A. Yes.

25 Q. And is that -- would you agree that that's not in the

1 future with respect to Time 81?

2 A. Yes.

3 Q. And you'd agree that it's not two frames in the future
4 from Time 81?

5 A. What is "it"?

6 Q. Time 81?

7 A. Sorry, I don't understand your question.

8 Q. I'll -- I'll move on from that. Thank you, sir.

9 You don't have -- withdrawn.

10 You gave some testimony this morning with respect
11 to at least some elements of the claims about the Doctrine
12 of Equivalents. Do you recall that?

13 A. Yes.

14 Q. And you don't have any theory at all under the
15 Doctrine of Equivalents for Claim Step 1C; is that
16 right?

17 A. That's correct.

18 Q. Nor do you have any Doctrine of Equivalents theory for
19 Claim Step 1B, correct?

20 A. That's correct.

21 Q. You talked about some timing data that you looked at,
22 test results. Do you recall that?

23 A. Yes.

24 Q. And those test results show that the interval -- let me
25 withdraw.

1 MR. KUBEHL: Could we -- could we go back to that
2 slide we were just looking at?

3 And one back, please. One more back, please.

4 Thank you.

5 Q. (By Mr. Kubehl) You've identified a time interval here
6 that you've identified as isochronous; is that correct?

7 A. Yes.

8 Q. And how many milliseconds is that?

9 A. 40.

10 Q. And it's between, what, about 45 and 85 milliseconds?

11 Those are the bookends?

12 A. Yes.

13 Q. Okay. Now, the packet that was communicated first
14 right here, tell me, if you would, what's the interval
15 between those packets?

16 A. Well, that would be 11 to 45, so it'd be 30 -- roughly
17 30 milliseconds.

18 Q. So we're got an interval of 30 here and an interval of
19 40 here; is that right?

20 A. Yes. However, the first transmission is not part of
21 DBS-SABE.

22 MR. KUBEHL: I respectfully move to strike as
23 nonresponsive.

24 THE COURT: That's nonresponsive. I'll sustain
25 it.

1 Again, limit your answers to the questions asked,
2 please.

3 Next question.

4 Q. (By Mr. Kubehl) These are not consistent time
5 intervals, would you agree?

6 A. Yes.

7 MR. KUBEHL: Could I please have Dr. Williams'
8 Slide No. 91?

9 Q. (By Mr. Kubehl) Dr. Williams, you showed the jury this
10 slide?

11 A. A version of it, yes.

12 Q. Okay. Did you show the jury a version that's different
13 than what you gave to us last night?

14 A. I didn't give you anything last night.

15 Q. Okay. Is this different --

16 A. The attorney --

17 Q. -- than what you showed the jury?

18 A. Sorry. Speak slowly.

19 I believe the attorneys gave you something last
20 night, but...

21 Q. Okay. Is this -- is what we're looking at here
22 different than what you showed the jury?

23 A. Yes.

24 Q. How is it different?

25 A. I believe there's boxes around the one I showed the

1 jury.

2 Q. Okay. Would you agree with me that this device and
3 this device are not anything you identified in your report
4 as CPE devices?

5 A. I included a reference to the documentation of devices,
6 so the answer would be no.

7 Q. So is your testimony to the jury that if we look at
8 your report, we will find both of these devices in your
9 report?

10 A. By reference, yes.

11 Q. And by what specific reference?

12 A. I believe redirect will bring that out.

13 Q. Can you tell the jury what that is?

14 A. I don't have the document number in mind.

15 MR. BLACK: Objection, Your Honor. It's
16 argumentative. He's asking him to cite a specific
17 paragraph in the report without showing him the report.

18 THE COURT: Well, the question as to a particular
19 paragraph is not particularly relevant. You've asked him
20 if it's in the report. He's identified that it is.

21 Let's move on.

22 MR. KUBEHL: Okay.

23 Q. (By Mr. Kubehl) What specific evidence have you
24 identified in your report that, say, this guy here actually
25 has been used in T-Mobile's network?

1 A. None that I recall.

2 Q. And you agree that this is a method claim, right?

3 A. Yes.

4 Q. And so, for example, that guy, if you want to rely on
5 him, you've got to show evidence that he's actually used in
6 T-Mobile's network?

7 A. Yes.

8 Q. And you'd agree that -- let's say that was your sole
9 basis for infringement, just that device only. You'd agree
10 that every other use of a device is irrelevant with respect
11 to the issue of infringement?

12 A. In your hypothetical, yes.

13 Q. Okay. So if -- if you were looking at, say, a number
14 of -- an amount of use that someone has made of the claim
15 in the '517 patent, if you're trying to measure that amount
16 of use, amount of infringement, you'd only look at the
17 devices that actually meet the claim, right?

18 A. I wasn't asked to measure amount of use, so I don't
19 understand your question.

20 Q. You didn't measure any amount of use, right?

21 A. I wasn't asked to do that.

22 Q. You didn't make any analysis of which devices are used
23 and how much, right?

24 A. It's a compound question. Could I have the question
25 again, please?

1 Q. Sure. You didn't do any analysis of which devices
2 actually are used, correct?

3 A. I took the representations of T-Mobile as to what
4 devices were authorized on their network.

5 Q. And my question is a little different. In terms of
6 actual using them -- actually using them, which is, we
7 agree, I think, what you have to show to find infringement,
8 right?

9 A. For a method claim, yes.

10 Q. Which is what we have here, right?

11 A. Yes.

12 Q. In terms of evidence of actual use, you haven't
13 analyzed any evidence of actual use of any device in your
14 report, correct?

15 A. I depend on the statements of T-Mobile, correct.

16 MR. KUBEHL: I'll object as nonresponsive.

17 THE COURT: Overruled.

18 Q. (By Mr. Kubehl) Dr. Williams, is the -- the definition
19 of CPE equipment or CPE station that you believe is the
20 right definition, is it dependent on who owns the device?

21 A. The Court has issued the claim construction regarding
22 that, so...

23 Q. In your report -- in your deposition, did you say that
24 in your report, you had applied a definition of CPE device
25 that was dependent on whether the customer or the owner

1 owned the device?

2 A. No. I described CPE -- the legacy use of the word CPE.

3 Q. We'll circle back to that.

4 THE COURT: There's no need to tell the jury what
5 we're going to circle back to, Mr. Kubehl. Ask your next
6 question.

7 MR. KUBEHL: Yes, Your Honor.

8 Q. (By Mr. Kubehl) Dr. Williams, in LTE, you gave some
9 testimony today to the jury about tunnels. Do you recall
10 that?

11 A. Yes.

12 Q. And is a bearer in LTE like a tunnel?

13 A. Similar.

14 Q. In LTE, does the network have to set up a tunnel before
15 packets can be sent through that tunnel?

16 A. It sets up a bearer, correct.

17 Q. And that has to be done before you can send any packets
18 through it?

19 A. Yes.

20 Q. You mentioned something called a TEID in your
21 testimony?

22 A. I did.

23 Q. And the TEID stands for a tunnel end-point identifier;
24 is that right?

25 A. It does.

1 Q. The Ericsson base station uses the TEID to identify the
2 tunnel through which the packets came to the base station;
3 is that right?

4 A. Yes.

5 Q. The Ericsson base station does not use the TEID to get
6 information about which QCI parameters to use for an
7 individual packet; is that right?

8 A. No.

9 MR. KUBEHL: Could we have Clip WTX-52?

10 And before you play that, it's at 290, Line 9
11 through 17.

12 MR. BLACK: Your Honor, improper impeachment.

13 THE COURT: Approach the bench, counsel.

14 (Bench conference.)

15 THE COURT: What are we trying to do here,
16 Mr. Kubehl?

17 MR. KUBEHL: Well, his answer in his -- in his
18 deposition is that the TEID does not identify the QCI
19 parameters, the parameters are associated with the -- with
20 a Q --

21 THE COURT: All right. You're going to ask him if
22 he was deposed, and did he tell the truth, and are you
23 going to lay a predicate to impeach him or you just want to
24 play the clip?

25 MR. KUBEHL: I should have laid that predicate.

1 THE COURT: Okay. Let's try it again.

2 MR. KUBEHL: Okay.

3 (Bench conference concludes.)

4 THE COURT: Let's proceed.

5 Q. (By Mr. Kubehl) All right. Dr. Williams, you gave a
6 deposition in this case, correct?

7 A. I did.

8 Q. And you were under oath, correct?

9 A. I was.

10 Q. You understood there'd be a transcript put together of
11 your questions and my answers [sic]?

12 A. I did.

13 Q. And you understood it would be videotaped?

14 A. I did.

15 Q. You understood you'd have an opportunity to correct if
16 you needed to?

17 A. I did.

18 Q. Okay. Does the Ericsson base station -- is it true
19 that the Ericsson base station does not use the TEID to get
20 information about what QCI parameters to use for an
21 individual packet?

22 A. No.

23 Q. Okay.

24 MR. KUBEHL: Can we have Clip WTX52. It's at
25 299 -- at 290, Line 9, through 290, 17.

1 (Videoclip played.)

2 QUESTION: To your understanding, does the
3 Ericsson eNodeB get that information from the TEID value?

4 ANSWER: What do you mean by "that information"?

5 (Videoclip ends.)

6 MR. BLACK: Your Honor --

7 THE COURT: I'm not going to comment on whether
8 it's effective or not. He's entitled to attempt to impeach
9 the witness. Let's move along.

10 MR. KUBEHL: Could we restart the clip, please?

11 MR. BLACK: Your Honor, may I approach?

12 THE COURT: What's the request, Mr. Kubehl?

13 MR. KUBEHL: I had requested that the clip be
14 played.

15 THE COURT: I thought you just played it.

16 MR. KUBEHL: No, it was cut off when he stood up.

17 MR. BLACK: No --

18 THE COURT: It appeared that it was finished to
19 me. You're telling me it was not finished?

20 MR. KUBEHL: Mr. Patterson, did you cut it off?

21 THE TECHNICIAN: It's not complete.

22 THE COURT: Then let's have a seat, Mr. Black.
23 Let's play the entire clip.

24 (Videoclip played.)

25 TECHNICIAN: This is the beginning of Media No. 3.

1 We're back on the record at 12 --

2 (Videoclip ends.)

3 THE TECHNICIAN: It's not. I don't have it. Do
4 you want to pull up the transcripts?

5 MR. KUBEHL: Let me try another question.

6 Q. (By Mr. Kubehl) At your deposition, was it true that
7 you didn't know whether Ericsson examines the contents of
8 the packets to determine a QCI value?

9 A. I believe that's correct.

10 Q. Okay. And do you still not know that?

11 A. I believe that's correct.

12 Q. You said that we would need to talk to Dr. Chrissan
13 about that, about whether Ericsson actually examines the
14 contents of the packets to determine a QCI value?

15 A. I believe that was my testimony, yeah.

16 Q. So you -- you're not offering an opinion to the jury
17 today that the Ericsson base station analyzes the contents
18 of the packets to determine the QCI values, correct?

19 A. No.

20 Q. That's not correct?

21 A. No, I'm not offering an opinion about the inspection of
22 the payload portion of a TEID GTP packet for determination
23 of the QCI value.

24 MR. KUBEHL: Object as nonresponsive.

25 THE COURT: Overruled.

1 Q. (By Mr. Kubehl) Okay. You do not -- just -- just for
2 clarity, you do not know whether Ericsson examines the
3 contents of a packet to determine QCI value; is that right?

4 A. Not by inspection of the source code, no.

5 Q. Dr. Williams, you submitted three expert reports in
6 this case; is that right?

7 A. Yes.

8 Q. Two on infringement among the patents and then one on
9 invalidity?

10 A. Yes.

11 Q. How much have you billed IV for that work?

12 A. I don't know.

13 Q. Can you give me any estimate?

14 A. A few hundred thousand dollars.

15 Q. Could it be more?

16 A. I -- again, I don't know the exact number.

17 MR. KUBEHL: Could we have Slide No. 32, please?

18 I'm sorry, the Williams's deck, Slide 32, please.

19 Q. (By Mr. Kubehl) This is a slide you showed to the
20 jury, right?

21 A. Yes.

22 Q. When you were explaining all the work you did that --
23 that went into the reports; is that right?

24 A. Yes.

25 Q. And you explained to the jury that you took an

1 independent look at the patents to determine whether you
2 felt like there was infringement; is that right?

3 A. I did.

4 Q. Okay. And as a professional, do you take pride in
5 doing an independent analysis?

6 A. I do.

7 Q. And is that what you did in this case?

8 A. I did.

9 Q. Okay. So the infringement report was about --
10 withdrawn.

11 In -- in your report, you either wrote or edited
12 every single paragraph of that report; is that right?

13 A. I did.

14 Q. And anything that wasn't written by you originally, you
15 would have been editing off of what IV's attorneys wrote;
16 is that right?

17 A. Yes.

18 Q. But at the end of the day, substantially all of the
19 material on the pages of each of the reports came from you
20 coming up with that material and typing it in yourself; is
21 that right?

22 A. Basically, yes, and it's my signature on the report.

23 Q. You signed it under penalty of perjury, right?

24 A. I did.

25 Q. Just the same as you rose -- rose your hand today?

1 A. Yes.

2 Q. You were --

3 MR. KUBEHL: Can I have the slide with the
4 materials considered, please?

5 Q. (By Mr. Kubehl) At the back of your report, you had a
6 list of the documents that you had considered, right?

7 A. Yes.

8 MR. KUBEHL: And next slide.

9 Q. (By Mr. Kubehl) This is one of the pages from your
10 report and one of the items that you -- the documents that
11 you listed as having considered was the February 28th, 2018
12 Plaintiff's infringement contentions, right?

13 A. That looks correct.

14 Q. And you weren't involved in preparing those
15 contentions, correct?

16 A. Not that I recall.

17 Q. So we did a comparison of those contentions to your
18 reports, and what we did is we created a document that
19 would use yellow highlighting to show where there was
20 exactly the same words in exactly the same order,
21 understand?

22 A. Yes.

23 Q. Okay.

24 MR. KUBEHL: Could we have Slide 2, please?

25 MR. BLACK: May I approach, Your Honor?

1 THE COURT: Approach the bench.

2 (Bench conference.)

3 MR. BLACK: It appears that he's going to take --
4 he's going to put -- he's got this big thing he's going to
5 put up. Seems argumentative.

6 THE COURT: You're going to have to speak up.

7 MR. BLACK: I'm sorry. I'm sorry, Your Honor.

8 He's going to compare them -- he's going to make
9 representations about comparing the report to some analysis
10 that they did, which he's not seen.

11 And there's no way to -- to verify. It's going to
12 be argumentative and inappropriate. Not impeaching him
13 with anything. He's --

14 THE COURT: He said he independently prepared his
15 report.

16 MR. BLACK: Yes.

17 THE COURT: I assume defense counsel is trying to
18 show that he didn't independently prepare his report.

19 MR. BLACK: But what he's going to put up on the
20 screen now, I don't know what it is, but it appears to be
21 some comparison they've made internally that they haven't
22 sponsored, which may or may not to be accurate. It's
23 argumentative.

24 THE COURT: Well, I mean, he certainly can -- he
25 certainly can make it clear that he hasn't seen it before,

1 and it's certainly something that you can on redirect make
2 sure that it's never been produced, it's never been
3 verified, you don't know if they made it right.

4 But I'm not going to keep him from trying to show
5 the jury --

6 MR. BLACK: Okay. Okay.

7 THE COURT: -- that what he said was independently
8 his work might not be if that's where he's headed.

9 MR. KUBEHL: That is.

10 MR. BLACK: I understand that point, Your Honor.

11 THE COURT: I've seen this -- this approach used
12 before, and I've never -- I've never prevented a lawyer
13 from trying to impeach an adverse witness based on the fact
14 that what he's showing is something he hasn't seen before.
15 You can certainly address that.

16 MR. BLACK: Okay.

17 THE COURT: All right? Let's proceed.

18 MR. KUBEHL: Thank you, Your Honor.

19 (Bench conference concluded.)

20 THE COURT: Let's proceed.

21 MR. KUBEHL: Thank you, Your Honor.

22 If we could have the slide back up.

23 Q. (By Mr. Kubehl) Okay. So what we're looking at is we
24 took all the pages from your -- your infringement reports,
25 and we compared them to the invalidity -- I'm sorry.

1 We took all the pages from your infringement
2 reports, and we compared them to the infringement
3 contentions that IV put together and that you didn't have
4 anything to do with, and we compared where we might find
5 exactly the same words in exactly the same order.

6 You understand that?

7 A. Yes.

8 Q. Now, those -- those infringement contentions, do you
9 know who -- who created those?

10 A. The attorneys for Intellectual Ventures.

11 Q. Okay. So what you see here on the screen is,
12 everywhere where you see yellow, that's where there were
13 exactly the same words in exactly the same order.

14 Understood?

15 A. Yes.

16 Q. Okay. And just to sort of drill down, the next slide,
17 this is from your '629 patent, and we're going to look at
18 Paragraph 174 from your '629 patent, and we're going to
19 compare it. On the right-hand side --

20 THE COURT: Mr. Kubehl, you're going to have to
21 ask the witness questions. You're not going to be able to
22 stand up here and tell him what's in front of him.

23 If you want to ask him to compare something to
24 something else, fine, but it's going to have to be in the
25 form of a question.

1 MR. KUBEHL: Okay.

2 Q. (By Mr. Kubehl) Dr. Williams, I'm going to ask you to
3 compare what's on the right-hand side to what's on the
4 left-hand side, but I'm going to blow that up for you. So
5 this slide is just showing you where I'm getting that
6 information.

7 So would you please compare the first sentence of
8 the document on the top, which is the infringement
9 contentions that the IV lawyers wrote, versus the first
10 sentence in the report that you wrote yourself.

11 A. Is that a question?

12 Q. Yes. I'm asking you to compare them, please.

13 A. I don't know how to answer yes or no to that.

14 Q. Do you see any differences in those words that are
15 underlined?

16 A. Minor differences, yes.

17 Q. Anything other than the word Ericsson in the document
18 that you wrote?

19 A. No.

20 Q. Okay. Going to the next sentence, do you see any
21 differences between the document that the IV lawyers wrote
22 and the document that you wrote?

23 A. I'm sorry. The document that I edited?

24 Q. The document that you testified that you substantially
25 wrote by yourself.

1 A. No. The document that I edited.

2 Q. Okay.

3 MR. KUBEHL: Object as nonresponsive.

4 A. Do I see any differences, no?

5 Q. (By Mr. Kubehl) Next sentence, do you see any
6 differences between --

7 THE COURT: Just a minute, gentlemen. If there's
8 an objection, then I don't expect anybody to keep talking
9 until the Court's ruled on that objection.

10 And if I take a moment to look at it, I expect
11 both the witness and counsel to remain silent.

12 Quite honestly, I don't think the witness
13 understood the question. I'm going to strike that entire
14 exchange, and you may reask your question, Mr. Kubehl.

15 MR. KUBEHL: Thank you, Your Honor.

16 Q. (By Mr. Kubehl) With respect to the --

17 MR. KUBEHL: If we can back up one.

18 Q. (By Mr. Kubehl) With respect to the second sentence,
19 is there any difference between those sentences?

20 A. No.

21 Q. With respect to the third sentence, is there any
22 difference at all between those sentences?

23 A. No.

24 MR. KUBEHL: Okay. Next slide, please.

25 Next slide.

1 Q. (By Mr. Kubehl) We're looking at Paragraph 176 now
2 from your report.

3 MR. KUBEHL: Next slide.

4 Q. (By Mr. Kubehl) Any difference at all between the
5 first sentence from the contentions and the first sentence
6 from your report?

7 A. No.

8 Q. Any difference at all between the second sentence of
9 the contentions and the second sentence of your report?

10 A. No.

11 MR. KUBEHL: Next slide, please.

12 Q. (By Mr. Kubehl) We're now looking at Paragraph 177.
13 Any differences at all between the contentions in your
14 report and this paragraph with respect to the language
15 we've underlined?

16 A. No.

17 MR. KUBEHL: Next slide, please.

18 Q. (By Mr. Kubehl) How about with respect to the last
19 sentence in the contentions versus the last sentence of
20 your report?

21 A. No.

22 MR. KUBEHL: Next slide, please.

23 Q. (By Mr. Kubehl) We're looking at Paragraph 170 from
24 your '517 report compared to the contentions. Any
25 difference between what's in the contentions and what's in

1 your report with respect to the first sentence?

2 A. Basically, no.

3 Q. There is one difference, right?

4 A. Yes.

5 Q. In your report, you said as I explained, and the
6 contentions don't have that, right?

7 A. Correct.

8 Q. So in the report, you inserted the word "I" that you
9 were explaining it, right?

10 A. Correct, as a result my editing.

11 Q. Okay. So the way that you edited what the lawyers sent
12 you is you took the lawyers' sentence and you said, that's
13 what I'm explaining, right?

14 A. For this particular sentence, correct.

15 Q. And then you did exactly the same thing for the next
16 sentence; is that right?

17 A. Correct.

18 Q. Okay.

19 MR. KUBEHL: Could we have the next slide, please?

20 Q. (By Mr. Kubehl) Okay.

21 MR. KUBEHL: 171, next.

22 Q. (By Mr. Kubehl) See any differences here between your
23 Paragraph 171 and the first part of the contentions?

24 A. Minor differences, yes.

25 Q. Again, you -- you changed it so that it was your words,

1 not the attorneys'; is that right?

2 A. It's my opinion.

3 Q. But what you changed was to add "I"?

4 A. This accurately reflects my opinion, yes.

5 Q. Did you change it to add the word "I"?

6 A. Yes.

7 Q. Okay.

8 MR. KUBEHL: Next. And next. And next.

9 Q. (By Mr. Kubehl) Any difference between any of those
10 sentences?

11 A. No.

12 Q. Dr. Williams, you represented, did you not, that
13 substantially all of the material on the pages of each of
14 the reports that you wrote came from you typing it in
15 yourself and that it was your material?

16 A. I believe I said that, yes.

17 MR. KUBEHL: Pass the witness, Your Honor.

18 THE COURT: Redirect.

19 REDIRECT EXAMINATION

20 BY MR. BLACK:

21 Q. All right, Dr. Williams.

22 MR. BLACK: First, let's go to Slide 130.

23 Q. (By Mr. Black) Okay. There were several questions
24 about this slide. Do you recall them?

25 A. Yes.

1 Q. And there were some -- something that you wanted to
2 tell the jury during the discussion of the 30 and 40
3 milliseconds with Mr. Kubehl. Do you recall that?

4 A. Yes.

5 Q. What would you like to tell the jury?

6 A. Mr. Kubehl highlighted this period of time and said
7 this was 30 milliseconds.

8 However, this period of time is before the
9 Ericsson DBS-SABE process begins. So this would not be
10 included in my infringement contention for the isochronous
11 events of 40 milliseconds.

12 Q. Thank you.

13 There was some questions about end-user QoS. Do
14 you recall that?

15 A. Yes.

16 MR. BLACK: Could we go to Slide 46?

17 Q. (By Mr. Black) What is the quality of service
18 indicator that QoS used for conversational voice in the
19 T-Mobile system?

20 A. It's 1, the highest.

21 Q. And why does T-Mobile set that at 1?

22 A. Because it instructs the software in the base stations
23 and in the network to treat that traffic with a very high
24 priority -- with a high level of importance.

25 Q. And what would happen to the experience of its

1 customers if it set the priority instead of to Priority 1,
2 QCI 1 to QCI 9 at the bottom of the list?

3 A. Dropped calls, warbles and effects in the speech,
4 inability to communicate consistently with whoever you were
5 talking to on the phone.

6 Q. Would that have an effect on the quality of service
7 experienced by the end-users?

8 A. Absolutely.

9 Q. Are the claims in this case directed to people who
10 understand the technology, those of skill in the art, or to
11 the common person on the street, the end-user?

12 THE COURT: You have something to say, Mr. Kubehl?

13 MR. KUBEHL: Yes. Objection, calls for a legal
14 conclusion.

15 Q. (By Mr. Black) Who is one of --

16 THE COURT: Just a minute. Overruled.

17 Ask your next question, Mr. Black.

18 Q. (By Mr. Black) Who is one of skill in the art?

19 A. One of skill in the art is someone who can read and
20 understand the patent and be able to implement the patent
21 if they desire.

22 And so it's someone who's trained in the art,
23 someone who understands the background of the -- of the
24 patent.

25 Q. And was it that kind of person who you were -- you had

1 in mind when you interpreted the claims and did your
2 infringement analysis regarding end-user QoS requirements?

3 MR. KUBEHL: Objection, leading.

4 THE COURT: Sustained.

5 Q. (By Mr. Black) What's the purpose of determining who
6 one of skill in the art is when doing an infringement
7 analysis?

8 A. To understand the level of skill of the person who's
9 reading those claims and understand what they would
10 understand, so their level of training in the technology.

11 Q. There were some questions about devices connected to
12 the network. Do you recall those?

13 A. Yes.

14 Q. And there were some questions about what was in your
15 report. Do you recall those questions?

16 A. Yes.

17 Q. Did you refer in your report to information you had
18 obtained from T-Mobile relating to the identity of devices
19 on its LTE system?

20 A. I did.

21 Q. Do you recall referring on direct to spreadsheet
22 PTX-1131?

23 A. I did.

24 Q. Do you know if that list contains the devices that were
25 pictured on the slide before?

1 A. It does.

2 Q. And how do you know that?

3 A. Because I cross-referenced them.

4 Q. There were some questions about your report and the
5 preparation of it. Do you recall those questions?

6 A. Yes.

7 Q. Is it a quick and easy analysis to analyze three
8 patents, 10 claims, with a Defendant who is claiming
9 non-infringement of every claim, or is that something that
10 takes significant effort?

11 A. It takes significant effort. As -- again, I spent
12 hundreds of hours doing this.

13 Q. And just what types of materials did you review in
14 order to make your opinions and prepare your report?

15 A. The patents, the statements at the Patent Office, the
16 statements of the Defendants, the infringement contentions
17 from the IV lawyers, the deposition testimony, all sorts of
18 documents.

19 Q. As a result of the work that you did, and in light of
20 the questions that were asked of you on cross-examination,
21 did that change any of your opinions with respect to
22 whether the asserted claims are, in fact, infringed?

23 A. No.

24 MR. BLACK: Thank you, Your Honor. Pass the
25 witness.

1 THE COURT: Further cross-examination?

2 MR. KUBEHL: Nothing further, Your Honor.

3 THE COURT: You may step down, Dr. Williams.

4 THE WITNESS: Thank you.

5 THE COURT: Plaintiff, call your next witness.

6 MS. FAIR: Your Honor, at this time, the Plaintiff
7 calls Dr. Douglas Chrissan.

8 THE COURT: All right.

9 MS. FAIR: And, Your Honor, may I have a moment to
10 pull out the source code? As you know, it has to be in
11 hard copy for confidentiality reasons.

12 THE COURT: You may have a moment.

13 Dr. Chrissan, if you'll come forward, please. Our
14 courtroom deputy will swear you in at this time.

15 (Witness sworn.)

16 THE COURT: Please come around, sir, have a seat
17 on the witness stand.

18 THE WITNESS: Thank you.

19 MS. FAIR: Your Honor, may we approach to hand
20 this to the Court Security Officer for the witness?

21 THE COURT: You may approach.

22 All right. Ms. Fair, you may proceed.

23 MS. FAIR: Thank you, Your Honor.

24 DOUGLAS CHRISSAN, PH.D., PLAINTIFF'S WITNESS, SWORN

25 DIRECT EXAMINATION

1 BY MS. FAIR:

2 Q. Would you please introduce yourself to the jury?

3 A. Yes. My name is Douglas Chrissan.

4 Q. And can you tell us, have you ever testified before a
5 jury before?

6 A. I have not.

7 Q. You're a little nervous?

8 A. A little bit.

9 Q. Can you tell us what you do for a living?

10 A. I'm a technical consultant.

11 Q. And what exactly does a technical consultant do?

12 A. One aspect of the work that I do is litigation work,
13 and that's what has led me to testify here today.

14 Another aspect is doing technical work for
15 technical product development companies, for example.

16 Q. Who are some of the companies that you've done
17 technical consulting for?

18 A. Recently, I did technical consulting for a company
19 called Silicon Valley X-ray, but most of my work in the
20 last couple of years has been with Intellectual Ventures.

21 MS. FAIR: And can we please have the
22 demonstratives on the screen, Mr. Horseman?

23 Q. (By Ms. Fair) Can you tell us about your educational
24 background that makes you qualified to be a technical
25 consultant?

1 A. Yes. I have a Bachelor's degree and a Master's degree
2 in electrical engineering from the University of Southern
3 California. I have a Ph.D. in electrical engineering from
4 Stanford University.

5 Q. And what specifically did you study when you were
6 working on your Ph.D.?

7 A. Primarily, communication systems and information
8 theory.

9 Q. What did you do besides schooling?

10 A. After I got my Bachelor's, I worked at Hughes Aircraft
11 for five years, primarily on satellite communication system
12 but also on some radar systems.

13 And then after I got my Ph.D., I worked at 8x8 for
14 five years doing primarily video communication systems, as
15 well as Voice over IP communication systems.

16 And after that, I spent six years at Texas
17 Instruments. That was primarily in digital subscriber line
18 communication systems, but I also did some work near the
19 end on WiMax and cellular power amplifiers.

20 MS. FAIR: Mr. Horseman, can I ask you to advance
21 the slides? I think the remote might be dead. Is it
22 working now? Thank you.

23 Q. (By Ms. Fair) So can you tell us, when you say digital
24 subscriber line systems, is that what we called DSL, what
25 we might be familiar with?

1 A. It is.

2 Q. And what is it like to work in the communications
3 industry?

4 A. It's very interesting. It's intense. It's
5 competitive. The technology continually evolves, seemingly
6 every year.

7 Q. Can you tell us, are you the Dr. Chrissan that we heard
8 about a little earlier today who reviewed the source code
9 and is going to tell us about how these base stations work?

10 A. I am.

11 Q. Did you have anything else to do with this case?

12 A. Yes. I did another task with respect to this case, and
13 that was a patent analysis.

14 Q. Let's talk about your source code review first.

15 What makes you qualified to look at source code
16 and tell us what type of functionality is happening on
17 these base stations?

18 A. In addition to and along with my work experience, I
19 have more than 20 years of professional software
20 development, and personally, I've been programming
21 computers since I was 13.

22 Q. And by the way, do you do this work for free?

23 A. No, I don't.

24 Q. How much do you charge for your time?

25 A. I charge \$225.00 an hour.

1 Q. And how has your experience in looking at source code
2 helped you, in this case, in studying the base stations
3 source code of Ericsson?

4 A. Well, certainly, I think one needs a fairly substantial
5 level of experience in source code development if one is
6 going to look at a brand new source code repository, as
7 it's called, and try to determine functionality in there.

8 Q. And does the source code that you looked at in this
9 case have any similarities to source code you've looked at
10 before?

11 A. Yes. The base station code is primarily written in the
12 computer language C. There's also some C++ and some
13 assembly language in machine code. Those are all languages
14 that I have extensive experience in.

15 Q. Are you familiar with other source code languages, too?

16 A. I am. I've written in more than I can remember right
17 now, but they include Java, ActionScript, PHP, Pearl, and
18 Fortran at Hughes and Basic when I was 13.

19 Q. And when you were at Hughes and at Texas Instruments
20 and at 8x8 working with source code, can you give us some
21 specific examples of the applications that you worked on
22 source code for?

23 A. Primarily, the devices that I spoke about, especially
24 video communication systems at 8x8 and Voice over IP
25 systems. The Fortran at Hughes Aircraft, that happened to

1 be for the radar application.

2 Q. What type of functionalities might be the same across
3 the communications systems you've worked with before and
4 the ones that you looked at in this case?

5 A. Well, the underlying -- for example, the underlying
6 modulation operations that take -- that happen in
7 communication systems tend to be common across
8 communication systems. Those have evolved significantly
9 over the years.

10 In the late '90s, early 2000s, a technique called
11 orthogonal frequency division multiplexing became popular
12 because the electronics evolved enough to support it. And
13 that's used in both LTE and digital subscriber line
14 communication devices.

15 Q. And that's the DSL you worked with at TI, was it?

16 A. Yes.

17 Q. Can you walk the jury through what it's like to do a
18 source code analysis? Where do you start, and how do you
19 move forward?

20 A. So I walked into a conference room. I sat down at an
21 ordinary laptop that I was told had source code that
22 operated on and executed on an Ericsson base station.

23 And the first thing I did was sit -- it was an
24 ordinary laptop. I sat down. I took an inventory of the
25 code that was there, tried to get my hands around it.

1 Before I walked in, I knew the functionality that
2 I was looking for and some search terms to start with. And
3 then it became an investigation.

4 The machine has search tools. There's no way to
5 pick at it manually. Like finding a needle in a haystack.

6 So you pull up these search tools and type in some
7 terms. And like -- as I said, it becomes an investigation
8 after that.

9 And you search and search for the functionality
10 that you're looking for and the functions that call all of
11 the functions that matter doing my best to prove that those
12 functions were true, correct, did what I thought they did
13 and those were the actual functions that do execute,
14 because every once in a while, you'll find one that goes
15 nowhere.

16 And what you'll end up with is printing a stack of
17 source code that looks like this, 2,000 pages, that does
18 show in that code certain functionality that occurs.

19 Q. Is that the only code you looked at, what's in those
20 2,000 pages next to you?

21 A. No. That's the code that was printed. The total code
22 is many thousands of files and millions of lines of code.
23 So the search tools are required.

24 Q. And you told us that you sat at this computer, and
25 there was source code on it you understood was from

1 Ericsson's base stations.

2 Do you know who set up that computer? Did the
3 Defendants put this together and represent it as their
4 source code for the base stations.

5 A. Yes, that's my understanding. The --

6 Q. And --

7 A. The source code computer was located at Defendants'
8 counsel's office.

9 Q. Is this a computer that anybody can just walk in and
10 look at and take a peek to see what's going on?

11 A. Well, the computer itself was ordinary, but the
12 contents of the computer were obviously secret once the
13 software was loaded on it.

14 Q. Can you tell us how long you spent in just this initial
15 stage of sifting through the millions of lines of code
16 looking for the functionalities that you wanted to find?

17 A. Yes. For this case, it was essentially full-time from
18 mid-January to mid-February of 2018 and then probably four
19 or five days in the latter part of February 2018, and then
20 I went about six months later for three days to look for
21 some final things.

22 Q. And that was your work searching for the functions; is
23 that right?

24 A. Searching and printing. And then, of course, outside
25 of that, then I analyzed -- once I had the paper code in

1 hand, I was able to continue to analyze that paper code to
2 confirm my understanding.

3 Q. Can you tell the jury, how do you know what kind of
4 terms you're searching for? I mean, is this like a Google
5 search where you just type in what you're looking for?

6 A. Much of the functionality is -- comes from -- the
7 search terms can come from the LTE standards.

8 They can also come from documents I reviewed that
9 were written by Ericsson engineers that describe that
10 sort -- the functionality of the source code.

11 Those documents helped significantly. While I was
12 confident that the source code itself was enough that I
13 understood the functionality, the Ericsson documents
14 definitely provided additional confidence and some terms to
15 search for.

16 Q. And did you use those technical documents in other ways
17 in your analysis?

18 A. The main thing I used them for was simply to confirm
19 that my understanding was correct.

20 Q. Did you look at anything else in this case to make sure
21 your understanding was correct?

22 A. I did review the deposition testimony of Ericsson
23 engineers who were asked questions about the source code,
24 and those depositions also confirmed my understanding.

25 Q. And do you plan to walk the jury through those 2,000

1 pages of source code you have next to you?

2 A. Fortunately for all of us, I don't.

3 MS. FAIR: Your Honor, at this time, we're going
4 to be displaying some of the source code, a portion of it
5 to walk through with the jury, and so I think we're going
6 to have to ask to seal the courtroom.

7 THE COURT: All right. Based on that
8 representation, at counsel's request, I'll order the
9 courtroom sealed. Those subject and not subject to the
10 protective order that's been entered in this case should
11 excuse themselves until the courtroom is unsealed and the
12 public is invited to return.

13 MR. KUBEHL: Your Honor, do we have the same
14 understanding that the Ericsson folks may stay?

15 THE COURT: Ms. Fair?

16 MS. FAIR: It's their source code, so as long as
17 T-Mobile and Ericsson are on the same page with them
18 remaining in the room, we're fine with it.

19 THE COURT: All right. We'll go forward on that
20 basis.

21 (Courtroom sealed.)

22 (Sealed Portion No. 4 saved in separate sealed
23 transcript.)

24 (Courtroom unsealed.)

25 THE COURT: All right. The record is unsealed.

1 You may continue.

2 MS. FAIR: Thank you, Your Honor.

3 Q. (By Ms. Fair) Can you tell us your second task that
4 you were given, this patent analysis, what was that about?

5 A. Well, it was very different from the first task, and
6 this task was to analyze 18 Ericsson patents.

7 Q. Do you have an understanding of how these 18 patents
8 came to be what you were analyzing?

9 A. Yes.

10 First, none of them are the three patents-in-suit.
11 These 18 patents were used by Ericsson in licensing
12 negotiations with a particular company called ZTE.

13 Q. And do you have a deeper understanding of why Ericsson
14 chose these 18 patents?

15 A. No, I don't.

16 Q. And do you have an understanding of how IV made use of
17 your conclusions after you did this patent analysis?

18 A. My understanding is that someone took my report,
19 Mr. Bratic, took my report and used it for damages
20 purposes.

21 Q. And did that change how you approached your analysis?

22 A. No, not at all.

23 Q. Can you tell us what you were looking at when you were
24 doing the patent analysis of these 18 patents?

25 A. Well, the main thing I was looking for was what I

1 considered the technical value of the patents based on my
2 experience working with patents.

3 Q. And so you've done this sort of technical valuation
4 before?

5 A. I have.

6 Q. Can you tell the jury in what type of context you've
7 done this?

8 A. Not in a litigation context. I have done it primarily
9 in the context of working at a company.

10 The first time was 20 years ago when I worked at
11 8x8. I managed our company's patent portfolio primarily
12 with our patent attorney, and I had an opportunity to
13 analyze our patents, as well as other patents.

14 Q. How many times over your 20 years in the communications
15 industry have you done technical valuations like this of
16 patents?

17 A. More than 10 times or more -- on at least a hundred
18 patents, and that's prior to any litigation work -- work as
19 a technical consultant.

20 Q. Did you approach this technical analysis as you have
21 done previously when you were in the industry?

22 A. Yes, much the same. The things that make patents
23 technically value haven't changed in 20 years.

24 Q. Can you tell the jury what you looked at, besides the
25 18 Ericsson patents themselves, to do your analysis?

1 A. Along with these 18 patents, Ericsson provided a claim
2 chart to ZTE, and I was provided that claim chart.

3 Q. What is a claim chart?

4 A. A claim chart is similar to what Dr. Williams showed.

5 It's a table where the rows are the specific
6 elements of the claims and the columns in this case is the
7 claim language, and then a description in this case of why
8 Ericsson believed that its claim was infringed by LTE.

9 And those claim charts contained, I believe, one
10 -- one claim per patent was charted.

11 Q. Did you look at anything else besides the patents and
12 the claim charts?

13 A. The claim charts themselves had references to the LTE
14 standards. So anywhere the LTE standards were referenced,
15 I looked at those. And in addition, for a couple of the
16 claims, I did some general industry research, publication
17 website searches.

18 Q. And you have here that you assessed each patent across
19 four criteria. Can you tell the jury what this is talking
20 about.

21 A. Yes. So the four criteria I assessed each patent by
22 was infringement, design-around potential, novelty, and
23 importance to LTE.

24 Q. What do you mean by infringement?

25 A. So infringement was my assessment of how likely it is

1 that the patent, in fact, infringes LTE. High is very
2 likely, low is probably not, and medium is somewhere in the
3 middle.

4 Q. And did you do the type of detailed analysis, digging
5 through every single limitation of every single claim of
6 every single patent you looked at and reviewing every word
7 of the LTE standard to come to a conclusive answer as to
8 whether there was infringement?

9 A. No, I did not.

10 Q. And how do you normally approach this infringement
11 question in a technical valuation if not that exhaustive?

12 A. Well, I read the patent through, and I understand the
13 standards and may refer to them, and I have the Ericsson
14 claim charts, so I was able to come up fairly quickly with
15 an assessment of infringement on these patents --

16 Q. And why didn't you --

17 A. -- at least for most of them.

18 Q. And why didn't you look at every claim of all of these
19 patents?

20 A. Well, I definitely looked at the claims that Ericsson
21 charted. If a claim that I looked at, as I scanned the
22 rest of the claims of the patent, it looked representative
23 of all the other claims, especially if there was already
24 infringement -- high infringement in my opinion, I didn't
25 spend my time looking at the other claims.

1 There were a handful of patents that I thought
2 that it was worthwhile to look at every claim because, as I
3 looked through, it looked like the claims had some
4 differences between them.

5 Q. And so how did you rank infringement here: High,
6 medium, low?

7 A. As I said, if I felt confident that a claim --
8 especially the claim Ericsson charted -- did, in fact,
9 infringe LTE, I ranked it high. If it -- if I thought that
10 it didn't, I ranked it low. And anything in the middle got
11 a medium.

12 Q. When you looked at design-around potential, what
13 question were you asking?

14 A. I was asking, how easy would it be to come up with an
15 alternative that doesn't infringe but has essentially no
16 negative effects?

17 And for that, it's either difficult to work
18 around, often because it's an element of the LTE standard.
19 You can't do it another way. Easy is an easy workaround,
20 and medium is somewhere in between.

21 Q. The third criteria here, novelty, how do you approach
22 that criteria?

23 A. So this is simply my assessment of how original is this
24 idea. Keep in mind, these were all issued U.S. patents.

25 So I presumed they were valid. And with that in

1 mind, I simply looked at them, and if I looked at it and I
2 thought, wow, this one is really valid, I mean, this one
3 has really complicated -- you know, really complicated
4 claims that look very novel to me, then I would go ahead
5 and rank it high.

6 If I thought it was an unusually simple concept, I
7 would rank it low, although I did that cautiously, and
8 you'll see that almost all patents got -- I think all but
9 four or five of them got medium.

10 Q. And, lastly, importance to LTE, tell the jury about
11 this factor and how you looked at that.

12 A. So importance to LTE, independent of the other three,
13 does the patent, in fact, add value to an LTE deployment?

14 And you hear yes a lot. High is a lot, low is not
15 very much, and medium some somewhere in between.

16 Q. Can you tell the jury what this table is?

17 A. Yeah. So this is the end result. This is the
18 punchline first. This is all 18 patents in a row, each of
19 the 18 ranked by infringement, design-around potential,
20 novelty, and importance to LTE, and you can see the summary
21 in one table.

22 Q. And this is PTX-1469?

23 A. It is.

24 Q. Once you had this table put together where you had
25 looked at these patents and analyzed each of these factors

1 and reached a conclusion as to each factor of each patent,
2 where do you go from there?

3 A. I grouped the patents.

4 Q. How did you group them?

5 A. If a patent ranked high for infringement, high for
6 importance and didn't have red anywhere, I ranked it an A
7 level patent. I thought those were very strong, very
8 useful patents.

9 Q. What about the other two categories?

10 A. If a patent ranked medium or high for infringement and
11 medium or high for importance, and it didn't have any red,
12 I ranked it a B. That's still a very good patent. And
13 I -- and I believe it has some measurable value.

14 Q. How many B level patents are there?

15 A. There are seven of those.

16 Q. And how many low level patents?

17 A. So if a patent had red in it -- it ranked low, and then
18 there's also 5 by 3 at the very bottom, this medium across
19 the board. I'll explain that one when we get there. So
20 there are eight total.

21 Q. And when you say when we get there, are you going to
22 march the jury through all 18 of these patents?

23 A. No, I am not. As I said, I believe that the -- we're
24 going to show 1(a).

25 I believe they're all very strong. I don't think

1 I'm going to take an opportunity to show any of the (b) and
2 -- you know, to save time. But, again, those are --
3 they're strong patents.

4 But we are -- as I said, I was careful about
5 calling a patent low, so we are going to have to work
6 through those reasons.

7 THE COURT: Counsel -- counsel, approach the
8 bench, please?

9 (Bench conference.)

10 THE COURT: I hate to interrupt your direct,
11 Ms. Fair. But the jury has been in the box almost two
12 hours. I assume you have a ways to go?

13 MS. FAIR: I do. This is probably a good stopping
14 point.

15 THE COURT: Then, we'll make this a break for a
16 recess, and then we'll come back and pick back up.

17 MS. FAIR: Yes, Your Honor.

18 (Bench conference concluded.)

19 THE COURT: Ladies and gentlemen of the jury, this
20 witness has some additional time to testify, and it's been
21 over an hour and a half since you got back from lunch. So
22 we're going to take an opportunity to have a recess at this
23 time.

24 You may simply close and leave your notebooks
25 there in your chairs. Follow all the instructions I've

1 given you, including, of course, not to discuss the case
2 among yourselves, and we'll be back shortly to continue
3 with this witness. The jury is excused for recess at this
4 time.

5 COURT SECURITY OFFICER: All rise.

6 (Jury out.)

7 THE COURT: The Court stands in recess.

8 COURT SECURITY OFFICER: All rise.

9 (Recess.)

10 COURT SECURITY OFFICER: All rise.

11 THE COURT: Be seated, please.

12 Are you prepared to continue with your direct,
13 Ms. Fair?

14 MS. FAIR: Yes, Your Honor.

15 THE COURT: All right. Dr. Chrissan, I think
16 you're doing good for somebody who has only testified this
17 one time, but some of these answers are very long, and to
18 the extent you can try to slow down, it will be
19 appreciated.

20 THE WITNESS: Thank you, Your Honor.

21 THE COURT: Okay. Let's bring in the jury.

22 COURT SECURITY OFFICER: All rise.

23 (Jury in.)

24 THE COURT: Welcome back, ladies and gentlemen of
25 the jury. Please have a seat.

1 We'll continue with the Plaintiff's direct
2 examination of the witness, Dr. Chrissan.

3 You may proceed, Ms. Fair.

4 MS. FAIR: Thank you, Your Honor.

5 Q. (By Ms. Fair) Dr. Chrissan, before we broke, you
6 mentioned that there were some patents that looked of
7 particularly high value. Can you tell us what type of
8 patents ended up in this A level category?

9 A. Those patents ranked high for infringement, high for
10 importance, and there was no red in any of their columns.

11 Q. And what type of benefits do these A level patents
12 provide?

13 A. They are good, solid patents. They provide a
14 significant, measurable, in my opinion, technical value to
15 LTE.

16 Q. And you told us you were going to tell us about just
17 one of these. Can you tell us which patents are you going
18 to tell us about of the A levels?

19 A. Yes. I think the '709 is worth mentioning, as are the
20 other two, which all attest to '709.

21 Q. That's the 7,961,709 patent?

22 A. Yes, it is.

23 Q. Can you tell us what this patent is about?

24 A. This patent is about your cell phone synchronizing to
25 the base station cell tower whenever it first turns on or

1 moves into the service area of that cell tower.

2 Q. And what does synchronization mean?

3 A. Synchronization is the equivalent to setting your watch
4 to someone else's watch. The phone will set its, quote,
5 clock to the base station's clock. And that sounds simple,
6 but it actually has to happen quickly, and it has to happen
7 at the level of less than one-one millionths of a second.

8 Q. Is synchronization generally a new concept?

9 A. No, it's not.

10 Q. So why would this patent be ranked, high, difficult,
11 high, high across the board and be A level?

12 A. In my opinion, this patent covers the synchronization
13 process that's used in LTE. It's a two-stage
14 synchronization process. It's mathematically complex.

15 The second stage is especially mathematically
16 complex, and it also includes adding in some information
17 about the cell tower in that synchronization information.
18 And that's why I ranked it green across the board.

19 Q. Can you tell us at a high level -- you told us you
20 weren't going to look at any of these specifically, but the
21 B level category, what types of benefits do these patents
22 provide?

23 A. Those are solid patents. I felt that each of them
24 provided some measurable technical value to LTE.

25 Q. And how many --

1 A. By technical value, I mean some technical
2 specification, such as capacity or throughput or number of
3 users or number of base stations required.

4 There's some -- I believe that there's at least
5 one technical specification that can be identified, and
6 this patent would make a measurable improvement to that --
7 at least that technical specification.

8 Q. How many B level patents did you determine there were?

9 A. Seven.

10 Q. Do you take it lightly to rank a patent as a low-level
11 patent?

12 A. No.

13 Q. And so you think it's important to tell this jury about
14 why these eight patents ended up in the low-value category?

15 A. Yes.

16 Q. Can you tell us, were there any that you determined
17 were unlikely to read on the LTE standard?

18 A. Yes. The '832, the '915, and the '130.

19 Q. Can you tell us what Patent 6,031,832 is about?

20 A. Yes. This patent is about giving one cell phone top
21 priority. It gets an -- it gets the -- in LTE, it would
22 get the entire uplink channel all to itself whenever it
23 wanted, and it would get the entire downlink channel to
24 itself whenever it wanted and more. And then only when it
25 didn't want those channels would other phones be able to

1 have access.

2 Q. And is this the Turina patent we heard Ms. Smith talk
3 about earlier with Mr. Paschke?

4 A. Yes, it is.

5 Q. Do you have an understanding of what the Defendants are
6 asserting with respect to the Turina patent, this '832
7 patent?

8 A. Well, I do understand that the Defendants are asserting
9 this as prior art against the '629 patent asserted in this
10 case.

11 Q. And do you have an opinion, or I guess I should say,
12 are you here to offer an opinion to the jury as to whether
13 or not the Turina patent is relevant to validity or
14 invalidity in this case?

15 A. No, I am not.

16 Q. So can you tell us why is it that the Turina patent
17 ended up as low level across the board for you in your
18 technical valuation?

19 A. In LTE, I believe we've heard the scheduling operation
20 happens every one millisecond, and the probability that any
21 one phone would ever get the entire uplink channel and the
22 entire downlink channel on any one same millisecond is next
23 to nothing.

24 And on top of that, I don't believe that satisfies
25 the fact that the patent requires the phone to have it --

1 that kind of priority continuously until it decides it's
2 done with it.

3 Thus, I rated it low for infringement. And then I
4 believe it's used as a design around. You could give
5 priority to two phones or three phones or do as most LTE
6 systems do, and that would be an intelligent scheduling
7 system across all phones.

8 For novelty, I don't personally believe it's novel
9 to simply give one -- make one device the king or queen at
10 all other's expense. And thus, I don't consider it so
11 important to LTE either.

12 Q. Can you tell us about the 6,259,915 patent and what
13 technology it covers?

14 A. Yes. This covers measuring -- taking measurements in
15 other frequency bands while your cell phone is connected to
16 your own cell tower.

17 So what happens is, when you're on a cell call and
18 you're driving away from your base station, your base
19 station will notice that it is losing you, and it will tell
20 you to start trying to measure other base stations around
21 in preparation for what's called a hand-over or a hand-off,
22 which we've heard about in this case yesterday.

23 Q. So why would this be a low infringement, easy design
24 around, and low importance?

25 A. Well, hand-over is very important. And this patent

1 would be very important, except that the claims of this
2 patent are limited to taking measurements in other bands
3 that are only first generation and second generation
4 technology.

5 In fact, this phone, whenever I move, probably
6 continuously takes measurements in other LTE bands, and
7 even third generation wireless CDMA bands.

8 But I believe it's very rare that this phone, as I
9 use it, would need to or be asked to take measurements in
10 1G or 2G bands. And thus that's the result -- that's the
11 reason for this result that you see.

12 Q. And the third patent you mentioned that you determined
13 was unlikely to read on the LTE standard, the 6,418,130,
14 can you tell us at a high level what technology this
15 covers?

16 A. This covers security association.

17 Q. What's security association?

18 A. Security association is a set of parameters, for
19 example, including the encryption keys that your phone uses
20 to keep your voice calls secure.

21 Fortunately, all of our voice calls on cell phones
22 are encrypted these days, so it's not easy for someone to
23 eavesdrop on them. And that requires encryption keys and
24 more, and that group of parameters is called a security
25 association.

1 Q. And how does this patent use security association?

2 A. So what this patent describes for simplicity, you use
3 the same security association keys while you're connected
4 to a base station as you do to your new base station after
5 you've been handed off.

6 Q. And why would that be low likelihood of infringement in
7 your opinion?

8 A. So LTE trading simplicity for some add -- some
9 additional security, LTE does have a new -- a modified
10 security association with new encryption keys when you hand
11 over. And thus the result of low infringement design
12 around is easy, just do what LTE does.

13 Q. Can you tell us about the 6,879,832 patent?

14 A. Yes. This one I ranked low on novelty.

15 Q. And why is that?

16 A. This has to do with assigning a temporary identifier to
17 your mobile station, your phone, while it's connected to a
18 particular base station.

19 Q. How does this work?

20 A. Well, your phone has a permanent identifier in it
21 that's unique to any other phone in the entire world, but
22 that identifier is a fairly long number.

23 So in order to make things more efficient when you
24 are connected to a base station, that base station will
25 give your phone a shorter ID, and that's -- it's a

1 nickname.

2 Q. And so why did you rank it high for infringement but
3 low for novelty?

4 A. It's very important. But in my opinion -- it's very
5 important, but in my opinion, you know, assigning a phone a
6 nickname temporarily, I don't believe that's especially
7 novel.

8 Now, I will note the claim of the patent does
9 include a mobile station in a mobile network with a core
10 network. But even with that, I believe that older -- there
11 are older wireless systems that have likely done the same
12 thing.

13 Q. Can you tell us about the 7,187,677 patent and the
14 technology that it covers?

15 A. Yes. This is stall avoidance timeout mechanism for
16 data received out of order. So the concept is fairly
17 simple. If your phone is going -- your phone sends packets
18 continuously. Typically they'll have a sequence number on
19 them, and the base station will know when one is lost.

20 Q. And what happens with the patent next?

21 A. So this patent is essentially about the base station
22 keeping track of how long should I wait for packet -- Lost
23 Packet No. 6 before giving up.

24 Q. And why would that be low on novelty in your opinion?

25 A. So the LTE -- the LTE systems do this.

1 It's in the standard for certain modes, not all
2 modes. There's a mode called unacknowledged mode. But LTE
3 systems do this. But for novelty, I think that the concept
4 of how long should I wait for something that's later lost
5 before I give up and move on is -- is somewhat simple.

6 Q. Can you tell us about the 6,9 -- sorry, 7,986,681
7 patent which you ranked as low importance?

8 A. Yes. So there are two ways -- we've said uplink is
9 communication from your phone to the base station, and
10 downlink is communication from the base station to your
11 phone. There are two ways to divide that up.

12 One is time, and that's where all the phones
13 transmit uplink for a while. Then the base station
14 transmits downlink for a while. When I say awhile, we're
15 talking a few milliseconds here.

16 So uplink, then downlink, then uplink, then
17 downlink, then uplink, then downlink. That's called time
18 division duplex.

19 The other option is to have the uplink on one
20 frequency band and the downlink on another frequency band
21 so that they can both transmit continuously. That's called
22 frequency division duplex.

23 Q. And when would this patent apply?

24 A. So this patent is very important for time division
25 duplex. It does not apply to frequency division duplex,

1 and it so happens that frequency division duplex is the
2 only method employed in the United States.

3 It's the overwhelming method employed in the
4 United States, so to the best of my knowledge, for T-Mobile
5 it's the only method they use.

6 So that's why I ranked it -- it's a good patent,
7 but it -- it's low for importance to LTE, at least in the
8 United States.

9 Q. And can you tell us about the 8,068,555 patent and
10 the technology that it covers.

11 A. Yes. This one is about matrix mathematics operations
12 that are done for multiple input, multiple output.

13 Now, multiple input, multiple output is a method
14 and procedure whereby your phone has two or more antennas
15 in it and/or the base station has two or more antennas in
16 it.

17 And we are seeing this in the world now -- excuse
18 me -- as carriers report their, quote, peak rate.

19 So MIMO is important, and this patent covers a
20 fairly complex mathematical operation that involves three
21 matrix -- at least three matrix multiplications.

22 Q. And so why would it get an easy for design-around
23 potential?

24 A. Right. So first, as an initial matter, I'll say that,
25 in my opinion, the claims of this patent are not written so

1 that a person of skill in the art can follow them, but I
2 gave the patent the benefit of the doubt, and I did what
3 was in the specification.

4 Aside from that, I believe that the mathematical
5 operations that are described in the steps that they are
6 described in the claim can be done in either -- in other
7 ways and can be easily worked around.

8 Q. And we're at that last patent, the '553 patent, that
9 got mediums across the board. Can you tell us what the
10 8,411,553 patent is about at a high level?

11 A. Yes. This is a unique patent because it's not -- it
12 doesn't claim or read on the normal operation of LTE. It's
13 about a test configuration. It -- it patents a test
14 configuration for handsets.

15 And that test configuration is defined as the
16 eNodeB sending out signals, some of which -- some portion
17 of which is meant for real mobile devices and some portion
18 of which is meant for, quote, virtual mobile devices, which
19 are mobile devices that don't even exist.

20 Q. Are you suggesting that testing isn't important?

21 A. No. Testing is very important, and this would be one
22 way to do it.

23 Q. So why would it get mediums across the board then?

24 A. Mainly because I was unable to rank it high or low
25 specifically. But I do believe that taken together, the

1 method of testing that it discusses is not something that I
2 would do if I were designing a test system. It's not
3 something that Ericsson did when Ericsson provided the test
4 results that we've seen in this case.

5 They -- they and I would use real phones and/or
6 what's called phone -- at least some similarities across
7 the board, and for that, I believe this patent is a low
8 value patent.

9 Q. So once you had your conclusions as to each factor and
10 each patent and had this table basically assimilated, can
11 you tell us at a high level what your takeaway is from
12 these 18 patents?

13 A. The main takeaway is that 10 of them are good, strong
14 patents, 11, if you're using TDD. But then there are --
15 there are 8 patents that, you know, in my -- in my
16 assessment, do rank low or get red in at least one
17 category.

18 And then there's the '553 that, you know, I
19 believe that there are better ways to test than what is
20 described.

21 Q. What was your next approach for your technical
22 evaluation in this case?

23 A. I did a similar analysis for the patents-in-suit.

24 Q. And what was your conclusions about the relative values
25 of the patents-in-suit?

1 A. I valued -- based on the concepts that are contained or
2 claimed within those patents, I valued the '206 patent as
3 60 percent of the total because of its concept of QoS-based
4 classification and scheduling, I valued the '629 at
5 20 percent, and the '517, the bandwidth allocation, at
6 20 percent.

7 Q. What can you tell the jury about the benefits that
8 these patents as a whole would provide to an LTE operator
9 in your opinion?

10 A. In my opinion, these patents are necessary for
11 efficient deployment of a combined voice and data system,
12 as Dr. Williams has described in this -- in his
13 presentation.

14 Q. And what did you conclude about what an LTE network
15 operator would need to do if they wanted to build an LTE
16 network without the technology in these three patents, the
17 Jorgensen patents?

18 A. I assessed technical value, so I wanted to be able to
19 say that I could -- believed I could pin it to some
20 technical specification.

21 And in my opinion, these patents are worth 20 to
22 25 percent tech -- increased technical value in terms of
23 capacity, data rate, and/or 20 to 25 percent less
24 infrastructure required.

25 Q. And can you tell the jury, how do the Jorgensen patents

1 we've been talking about stack up against the A level
2 patents you looked at in the 18 Ericsson patents?

3 A. In my opinion, the three Jorgensen patents together
4 fall in the range of one and two-thirds to two and a half
5 of the Ericsson A level patents.

6 Q. And how do the Jorgensen patents stack up against the
7 Ericsson B level patents?

8 A. In my opinion, all three of the Jorgensen patents are
9 worth about five to six of the Ericsson B level patents.

10 Q. So how can you say that the three patents that we've
11 been talking about in this lawsuit stack up so high up
12 against the patents of a company like Ericsson?

13 A. I simply did an analysis of patents, and these are my
14 results. In my opinion, the '517 and the '629 patents are
15 about equivalent to an Ericsson B each. And the '206 is a
16 very strong patent because of its -- its -- I show it here
17 as equivalent as to about three Ericsson B patents because
18 of its fundamental value of converging voice and data onto
19 one channel.

20 MS. FAIR: Pass the witness, Your Honor.

21 THE COURT: Cross-examination.

22 Proceed when you're ready, counsel.

23 MR. KUBEHL: Thank you, Your Honor.

24 CROSS-EXAMINATION

25 BY MR. KUBEHL:

1 Q. Hello, Dr. Chrissan.

2 A. Hello, Mr. Kubehl.

3 Q. Nice to see you again.

4 A. And likewise.

5 Q. So you were retained by IV in this case, right?

6 A. I was.

7 Q. And you had two jobs to do, it sounds like.

8 A. Yes.

9 Q. One of those was to look at Ericsson's source code.

10 A. Yes.

11 Q. And you spent a lot of time doing that.

12 A. I described how much.

13 Q. And at the end of that analysis, you felt like you had
14 pretty good grasp and a good understanding of how the
15 Ericsson base station source code works?

16 A. Yes.

17 Q. The second part of your analysis was this portfolio
18 analysis?

19 A. Yes.

20 Q. And, generally, you were looking at the three Malibu
21 patents in this case and comparing those from a technical
22 standpoint, what their technical value would be to other
23 groups of patents, correct?

24 A. I -- I used 18 Ericsson patents and compared those to
25 Malibu -- to the Jorgensen patents.

1 Q. Your report compares them to a group of Ericsson
2 patents and then a second group of patents, correct?

3 A. Yes.

4 Q. Okay. So to be able to understand what those Malibu
5 patents covered and how valuable those would be, you did an
6 analysis of the claims of the Malibu patent, right?

7 A. Yes.

8 Q. And you understood what the claims covered, correct?

9 A. Yes.

10 Q. Okay. Now, in other cases, you have given reports on
11 the issue of infringement, haven't you?

12 A. Yes, I have.

13 Q. So you've -- you've actually taken your knowledge that
14 you've learned in the case of the source code, and you've
15 taken your knowledge of what the patent covers, you've put
16 those together, and you've said whether there is or isn't
17 infringement, correct?

18 A. In other cases?

19 Q. In other cases.

20 A. Yes.

21 Q. That's something you feel like you're competent to do,
22 correct?

23 A. Yes. I'm competent to do that.

24 Q. Okay. In this case, you really knew how the source
25 code worked, right?

1 A. Yes. I feel like I did.

2 Q. And you knew what Malibu patents covered from a claim
3 perspective, right?

4 A. I'd do the same level of analysis for the Malibu patent
5 that I did for the Ericsson 18.

6 Q. But you couldn't try to value those patents from a
7 technical perspective without understanding what the claims
8 covered, would you?

9 A. No, I wouldn't.

10 Q. Okay. So even though you had those two pieces of
11 information in this case, you didn't offer any opinions
12 about infringement; is that right?

13 A. That is correct.

14 Q. So you're not here to tell the jury that they're --
15 that anything infringes in this case, correct?

16 A. That is correct.

17 Q. They will not hear that from you, right?

18 A. That is correct.

19 Q. With respect to the analysis that you did with the
20 source code that dealt with the uplink scheduler, okay, the
21 uplink scheduler holds a scheduling competition in every
22 slot, correct?

23 A. Yes, it does. I think there are better words than
24 competition, but okay.

25 Q. In your deposition, you agreed it was a competition,

1 correct?

2 A. I believe I said the exact same thing in my deposition.
3 I think there are better words than competition, but, okay,
4 you can use that word.

5 Q. Did you say that if someone called it a competition,
6 you would not say that that was incorrect?

7 A. I think that was my wording.

8 Q. Okay. And in this scheduling competition, there's no
9 guarantee that any phone is going to get any particular
10 slot, correct?

11 A. That's correct.

12 Q. I think the way you characterized it was the chances of
13 any phone getting a particular slot are somewhere between a
14 coin toss and something less than a hundred percent; is
15 that fair?

16 A. I believe my words were less than a hundred percent.
17 I don't remember the words "coin toss." If you represent
18 that, okay.

19 Q. With respect to your expert report that you gave in
20 this case, you did an analysis of that uplink scheduler,
21 right?

22 A. Yes.

23 Q. And in that analysis, you didn't ever use the word
24 "reserve" even once, correct?

25 A. I'm sorry, could you repeat that question?

1 Q. Sure. You didn't use the word "reserve" or
2 "reservation" anywhere in your report for the uplink
3 scheduler, correct?

4 A. I don't know.

5 Q. Okay.

6 MR. KUBEHL: Could we have Clip No. 13, please, at
7 222, 15 through -- I didn't lay the predicate. If I may
8 withdraw that question, Your Honor.

9 Q. (By Mr. Kubehl) Did I take your deposition, sir?

10 A. No, you didn't.

11 Q. That's true. That is true. He's good.

12 Did you have your deposition taken in the case?

13 A. I did.

14 Q. And was it by a very able attorney?

15 A. A very able attorney, yes.

16 Q. Is he sitting right over there?

17 A. Yes.

18 Q. Okay. Did you raise your hand in that and tell the
19 truth?

20 A. Yes.

21 Q. All right. And you knew there was a transcript being
22 made?

23 A. Yes.

24 Q. And that you'd be videotaped, and it could be shown to
25 the jury?

1 A. Yes.

2 Q. Okay.

3 MR. KUBEHL: Could we have Clip No. 13, please?

4 It's at --

5 MS. FAIR: Objection. I'm sorry, Your Honor, but
6 he said he didn't remember, and it's improper to publish to
7 the jury the transcript from the deposition if the
8 witness's testimony is that he didn't remember.

9 He should have the opportunity to have his memory
10 refreshed before it's played for the jury. It's not an
11 impeachment.

12 THE COURT: That's sustained.

13 MR. KUBEHL: May I approach with a copy of his
14 transcript?

15 THE COURT: You may approach with a written copy
16 of his transcript.

17 THE WITNESS: Before I open this, could I ask you
18 to repeat --

19 THE COURT: No. No, sir. You're not here to ask
20 questions. You're here to answer questions.

21 Direct him to where -- the section that will
22 refresh him might be, counsel.

23 Q. (By Mr. Kubehl) Would you please turn to -- I think
24 it's the last tab or the second to the last tab in your
25 binder. It's your deposition transcript, and I'll point

1 you to Page 222.

2 A. Is it second to last, 4?

3 Q. Yes, there should be only one deposition transcript in
4 the binder.

5 A. Okay.

6 Q. Okay. And when you've got to Page 222, please let me
7 know. I'll direct you to Line 15 through 24.

8 A. 222, Line --

9 Q. Line 15 to 24.

10 A. Right. Okay. In Paragraph 66, when you said the
11 timing mechanism --

12 THE COURT: Don't -- don't read it, cou -- don't
13 read it, Dr. Chrissan. Look at it.

14 THE WITNESS: I'm sorry.

15 THE COURT: Don't -- don't read it out loud. Read
16 it to yourself.

17 Q. (By Mr. Kubehl) Just let me know when you've had a
18 chance to read it.

19 A. I've read it.

20 Q. Does that refresh your recollection that in your
21 report, you never used the word "reservation request"?

22 THE WITNESS: Your Honor, I must ask a
23 clarification question about -- I don't understand if
24 report means deposition or my -- my report that was
25 submitted about software operations.

1 MR. KUBEHL: This was talking about his expert
2 report.

3 THE WITNESS: Okay.

4 MR. KUBEHL: On -- on software operation.

5 THE WITNESS: Okay.

6 THE COURT: Restate your question, Mr. Kubehl.

7 Q. (By Mr. Kubehl) Does -- does this help refresh --
8 refresh your recollection that in your report that analyzed
9 the Ericsson source code, you did not use the word
10 "reservation request" even once?

11 A. I'm sorry to pause. Use the word and have an opinion
12 mean two different things to me.

13 MR. KUBEHL: I'll object as nonresponsive.

14 A. I agree that this deposition states that I did not have
15 an opinion.

16 THE COURT: All right. Do you understand the
17 question, Dr. Chrissan?

18 A. Please state it again.

19 Q. (By Mr. Kubehl) In your expert report analyzing the
20 source code for the Ericsson base station, is it a fact
21 that you did not use the word "reservation request"?

22 A. I don't know. I don't remember every word of that
23 report.

24 MR. KUBEHL: Your Honor, may I play the clip?

25 THE COURT: You can't impeach what he doesn't

1 know.

2 MR. KUBEHL: It is -- it isn't impeachment. It's
3 directly contradictory to what he just testified.

4 If I could approach and show you the testimony if
5 that would help.

6 THE COURT: Let's do that. Approach the bench.

7 (Bench conference.)

8 MR. KUBEHL: So this is -- I don't think I used
9 the word "reservation request" in this report, and he just
10 said --

11 COURT REPORTER: Judge --

12 THE COURT: She can't hear you.

13 MR. KUBEHL: This was the testimony. He's
14 testified in his deposition that he does not think he used
15 the word "reservation request" in his report.

16 MS. FAIR: Your Honor, he's been asking about --
17 about his opinion and what's in his report. The questions
18 have been confusing and, so I think --

19 THE COURT: They have been. I'm going to let him
20 play the clip, but I'm going to let you address it on
21 redirect.

22 MS. FAIR: Yes, Your Honor.

23 THE COURT: And if you want to draw a distinction
24 between using a word or having a concept, I'll leave that
25 to you.

1 I think there's some confusion in his mind about
2 conceptually whether there's -- that's there or whether he
3 used a precise word.

4 But I think the predicate and the refreshment has
5 taken place enough to allow the impeachment, so let's go
6 ahead with the clip.

7 MS. FAIR: And, Your Honor, I just want to preview
8 that under the rule of optional completeness, I have other
9 portions of a deposition surrounding this that I think will
10 need to be addressed on -- on redirect to put it in
11 context.

12 THE COURT: That's -- that's your privilege.

13 MS. FAIR: Yes, Your Honor.

14 (Bench conference concluded.)

15 THE COURT: All right. Let's proceed with the
16 videoclip.

17 (Videoclip played.)

18 QUESTION: In Paragraph 66, when you said the
19 timing mechanism's non-zero estimate, you don't have any
20 opinions -- first of all, you don't have any opinions in
21 this report that this estimate is a reservation, correct?

22 ANSWER: I -- this -- this report is purely about
23 how the software operates.

24 QUESTION: Right.

25 ANSWER: So I don't think I used the word

1 "reservation request" in this report.

2 (Videoclip ends.)

3 Q. (By Mr. Kubehl) Were you asked that question, and did
4 you give that answer?

5 A. Yes.

6 Q. Okay.

7 THE COURT: Let's move on.

8 MR. KUBEHL: Could we have Slide No. 2, please?

9 Q. (By Mr. Kubehl) Dr. Chrissan, this is a figure that
10 you put together, right?

11 A. It is.

12 Q. It was part of your report?

13 A. Yes.

14 Q. And nowhere on this figure does it identify any
15 reservation, correct?

16 A. That's correct.

17 MR. KUBEHL: Could we have the next slide, please?

18 Q. (By Mr. Kubehl) And you're aware that Dr. Williams
19 submitted an expert report where he took your figure, and
20 he wrote Reserve 3 and Reserve 4 on top of your figure?

21 A. Yes, I am.

22 Q. Okay. And by the time that you had signed your report,
23 you'd seen a draft of Dr. Williams's report?

24 A. Correct.

25 Q. Including this figure, right?

1 A. Yes.

2 Q. And you knew about his theories on reservations, right?

3 A. Yes.

4 Q. That report of Dr. Williams had two parts to it, it had
5 an LTE overview part and then it had an infringement part,
6 correct?

7 A. Yes.

8 Q. And you agreed with the first part of that report,
9 correct?

10 A. Yes.

11 Q. But you didn't offer any opinions on the infringement
12 part, right?

13 A. That's correct.

14 Q. And you knew when you signed your report, that you were
15 having to sign it under penalty of perjury; is that right?

16 A. Yes.

17 Q. Just like the oath that you took today?

18 A. Yes.

19 Q. Thanks.

20 So with respect to the second part of the analysis
21 you did, the portfolio analysis --

22 A. Yes.

23 Q. -- in that analysis, you were not trying to calculate
24 what the economic value of those patents are, correct?

25 A. That is correct.

1 Q. You wouldn't know how to make a conversion between
2 technical value and economic value of a patent; is that
3 right?

4 A. That is correct.

5 Q. And you've not offered any opinions in your report that
6 it's proper to make a one-to-one conversion between what
7 you think the technical value of a patent is and what the
8 economic value of a patent is; is that right?

9 A. That's correct.

10 Q. So in your analysis, one of the things you did was to
11 compare these Malibu patents to 18 Ericsson patents, right?

12 A. Yes.

13 Q. And you gave some testimony on direct, and you were
14 talking about infringement with respect to those Ericsson
15 18 patents. Do you recall that?

16 A. Yes.

17 Q. And just -- just to clarify, these are Ericsson-owned
18 patents, right?

19 A. Yes.

20 Q. And so when you were talking about infringement, you
21 were not talking about Ericsson infringing these patents,
22 right?

23 A. That's correct.

24 Q. You'd be talking about some other entity out there that
25 actually makes things, could then -- they could infringe,

1 is that --

2 A. Correct.

3 Q. Okay. So in your report -- withdrawn.

4 When you went about this analysis with the
5 portfolio -- portfolio analysis, IV's lawyers asked you to
6 look at 18 specific Ericsson patents and to limit your
7 analysis to only those patents; is that right?

8 A. Yes.

9 Q. And in your report, you referred to those 18 Ericsson
10 patents as the Ericsson/ZTE representative patents, right?

11 A. Yes.

12 Q. But you don't consider those patents representative of
13 anything, do you?

14 A. I don't know.

15 Q. The term representative patents came from IV's lawyers;
16 is that right?

17 A. I don't know.

18 Q. In your deposition taken in November, were you asked
19 whether the term representative patents came from IV's
20 lawyers? And did you say, to your knowledge, it was
21 correct, that it came from IV's counsel?

22 MS. FAIR: Objection, Your Honor. He just read to
23 the jury, publishing the transcript from the deposition,
24 without properly proceeding with the foundation for
25 impeachment.

1 THE COURT: And what's the legal basis of your
2 objection?

3 MS. FAIR: That the witness said, I don't know,
4 and so if he -- if Mr. Kubehl wants to use the deposition,
5 he should use it to refresh the witness's recollection, not
6 take this as an opportunity to read from the deposition out
7 loud.

8 THE COURT: In response to a witness's
9 representation that they don't know, that does usually --
10 that does not typically open the door to impeachment, not
11 without at least an opportunity to refresh the witness.

12 MR. KUBEHL: Understood, Your Honor.

13 THE COURT: So let's proceed on that basis.

14 Q. (By Mr. Kubehl) Dr. Chrissan, could you turn to
15 Page 251 of your deposition transcript, and I'll direct
16 your attention to Line 18. And I'll ask you to read that
17 through 252, Line 4, just -- just to yourself.

18 A. Oh, okay.

19 Q. Does that refresh your recollection that the term
20 representative patents was something that just came from
21 IV's counsel calling them that?

22 A. Yes.

23 Q. Dr. Chrissan, you've never read the Ericsson/ZTE
24 license agreement; is that correct?

25 A. No, I have not.

1 Q. Until you saw the expert report of Dr. Stephen Wicker,
2 the expert for the Defendants in this case, you didn't know
3 that that license was not only about 18 patents but, in
4 fact, was a license to Ericsson's entire LTE portfolio; is
5 that right?

6 A. I'm sorry. Which expert report?

7 Q. Dr. Wicker's report.

8 A. I'll answer that's mostly correct.

9 Q. Okay. You learned for the first time from Dr. Wicker's
10 report, the Defendants' expert, that this was a license not
11 just to 18 patents but to Ericsson's entire LTE portfolio;
12 is that right?

13 A. You said Dr. Wicker?

14 Q. Yes, sir.

15 A. Yes, that's correct.

16 Q. Okay. And you've read Dr. Wicker's report, correct?

17 A. Most of it.

18 Q. And you understand that he identified a number of
19 additional Ericsson LTE patents that he thinks are quite
20 valuable?

21 A. I think so.

22 Q. And you have not looked at any of those additional
23 Ericsson LTE patents, have you?

24 A. That's correct.

25 Q. And why is that?

1 A. I -- I don't know. I -- I -- I was not -- I didn't
2 consider it part of my role here.

3 Q. Is your role limited to what IV's lawyers ask you to
4 address?

5 A. With respect to these patents, yes.

6 Q. And IV's lawyers had instructed you to look at the 18
7 and only the 18, correct?

8 A. Yes.

9 Q. Dr. Chrissan, you don't believe that the 18 Ericsson
10 LTE patents that you looked at are the only Ericsson LTE
11 patents that have any value, do you?

12 A. I would speculate that additional Ericsson patents have
13 value.

14 Q. If it is true that Ericsson's LTE -- LTE-essential
15 portfolio in the United States is around 400 patents, based
16 on your experience in the industry, would you think that
17 there'd be quite a bit more value other than just these 18?

18 MS. FAIR: Objection, Your Honor. There's no
19 foundation for Ericsson having proven that 400 of their
20 patents are standard essential.

21 THE COURT: Well, it also calls for speculation.
22 I'll sustain.

23 Q. (By Mr. Kubehl) Do you have any sort of lower level
24 of additional LTE patents that there'd have to be before
25 you'd say there's more value there?

1 A. I'm sorry. Could you please repeat the question?

2 Q. Sure. Do you have in your mind some sort of floor
3 value of additional LTE patents that Ericsson would have to
4 have beyond 18 for you to be able to say there's got to be
5 more value there than just those 18?

6 A. No. I don't have a number in mind.

7 Q. Okay. But you don't have any reason to believe that
8 the entire value of what was licensed to ZTE is in those 18
9 patents, do you?

10 A. That's correct.

11 Q. With respect to the Malibu patents, now, the ones that
12 are in this case, when you looked at those patents and
13 you -- you established sort of a baseline of value for
14 those patents, right?

15 A. Yes.

16 Q. And when you looked at that, you assumed that those
17 patents were valid and infringed, right?

18 A. Yes.

19 Q. Why did you make that assumption?

20 A. I made the assumption -- I made the same assumption for
21 the Ericsson patents. That was my starting point.

22 Q. Okay. Throughout your analysis of the Malibu patents,
23 you never performed any analysis of whether those patents
24 were valid or infringed, did you?

25 A. That's correct, to the level of depth of a legal

1 proceeding, nor did I for the Ericsson patents.

2 Q. In your report, you didn't -- you didn't have any
3 analysis of the Malibu patents that would have described
4 how those patents would fare on your scale of the multiple
5 factors you looked at; is that correct?

6 A. That's correct.

7 Q. You didn't do that analysis, did you?

8 A. I assessed the Malibu patents. That's -- so my answer
9 is that's not entirely correct.

10 Q. Okay. So you started out the analysis, and you've got
11 two groups of patents. You got Malibu over here, and we've
12 got --

13 THE COURT: Let me interrupt a minute, counsel.

14 We seem to be referring to the three patents-in-suit, the
15 accused patents repetitively as the Malibu patents. I've
16 instructed the jury that these are the asserted patents or
17 the patents-in-suit.

18 I don't want any confusion in the record. Let's
19 try to call them the asserted patents or the
20 patents-in-suit. Somehow this Malibu label has crept into
21 the testimony, and I'm concerned about confusion in the
22 record.

23 So just so we don't have any, let's make sure that
24 both sides refer to these three patents that are at issue
25 in this case as the patents-in-suit or the asserted patents

1 and not as the Malibu patents, all right?

2 MR. KUBEHL: Yes, sir.

3 THE COURT: Good. Let's proceed.

4 Q. (By Mr. Kubehl) So you're doing this analysis, and on
5 one hand, you've got these asserted patents, three asserted
6 patents, right?

7 A. Yes.

8 Q. And on the other hand, you've got the Ericsson 18
9 patents, right?

10 A. Yes.

11 Q. And you start them both at this position, they're
12 equal, a baseline. These are both valid and infringed,
13 right?

14 A. Yes.

15 Q. And for the Malibu patents, that's the way you kept it,
16 right?

17 THE COURT: Mr. Kubehl, short memory?

18 MR. KUBEHL: Yeah.

19 THE COURT: Ask the question again.

20 Q. (By Mr. Kubehl) For the asserted patents, that's where
21 you kept it, right?

22 A. That's partially correct.

23 Q. Okay. For the Ericsson patents, for several of those
24 patents, that value went down because of several factors,
25 right?

1 A. That's correct.

2 Q. You knew that the Defendants in this case had raised
3 several pieces of prior art against this case against the
4 asserted patents, didn't you?

5 A. Yes, I did.

6 Q. And in your treatment of the Malibu patents, you -- you
7 pretty much ignored that prior art, didn't you?

8 A. Yes, I did.

9 THE COURT: And, again, you mean the
10 patents-in-suit? You called them the Malibu patents,
11 again.

12 MR. KUBEHL: I have an outline here. That's the
13 problem. I'll be better.

14 THE COURT: Please try to.

15 MR. KUBEHL: Yes, sir.

16 THE COURT: I'm concerned about confusion in the
17 record.

18 MR. KUBEHL: Okay.

19 Q. (By Mr. Kubehl) You pretty much ignored the prior art
20 that had been identified with respect to the asserted
21 patents. Is that because IV's lawyers told you to?

22 A. No.

23 Q. You just decided on your own to do that?

24 A. No. It was a fair comparison with Ericsson. I didn't
25 look up any prior art for the Ericsson patents either.

1 Q. But for the Ericsson patents, you did an analysis of
2 whether you thought those patents were likely invalid,
3 right?

4 A. I did an assessment of novelty.

5 Q. Right. And in your report, you talk about patents
6 being likely invalid, likely obvious, right?

7 A. That's partially correct.

8 Q. But you didn't do that for the Malibu side, right?

9 A. I didn't explicitly state that for Malibu, correct.

10 Q. You didn't say anything about that in your report, did
11 you?

12 A. That's correct.

13 Q. You used these five factors that you talked about to
14 downgrade the value of 15 of the 18 Ericsson patents,
15 didn't you?

16 A. That's partially correct.

17 Q. And did you have any outside inputs as to why you
18 should use those factors against the Ericsson patents and
19 not against the asserted patents?

20 A. I assessed the Malibu patents the same way I assessed
21 the Ericsson patents.

22 MR. KUBEHL: Object as nonresponsive.

23 A. I'm sorry, what's your question again?

24 THE COURT: I'll sustain that the answer is
25 nonresponsive.

1 And, Dr. Chrissan, I want to ask you to play by
2 the same rules. Don't call them the Malibu patents. Let's
3 call them the asserted patents, okay?

4 Restate your question, counsel.

5 Q. (By Mr. Kubehl) Did you have any outside influences in
6 terms of whether you would apply your five factors not just
7 to the Ericsson patents but also to the Malibu patents?

8 A. No, I didn't.

9 Q. Okay. Using the analysis that we've just discussed,
10 you ended up ranking one of the asserted patents, the '206
11 patent, as being more valuable than even the most valuable
12 Ericsson LTE patent that you looked at, correct?

13 A. Yes.

14 Q. You found that Malibu patent -- you found that asserted
15 patent to be 25 to 50 percent more valuable than even the
16 very best Ericsson LTE patent, correct?

17 A. Of the 18, yes, I believe that's correct.

18 Q. Do you have any reason to doubt, though, that there are
19 other Ericsson patents that might be much more valuable
20 than this '206 patent?

21 A. As I sit here, I have no reason to doubt that, but I
22 don't know.

23 Q. Did you know that in 2014, the European Patent Office
24 nominated Ericsson inventors as finalist for inventor of
25 the year for their contributions to LTE?

1 A. Yes.

2 Q. Did you know that when you did your report?

3 A. I may have.

4 Q. But you didn't mention that in your report, right?

5 A. That's correct.

6 Q. That didn't play a role in your analysis, did it?

7 A. That's correct.

8 Q. Would you agree that the folks at the European Patent
9 Office have some expertise in determining which patents
10 have technical value compared to other patents?

11 A. For the patent -- yes.

12 Q. Maybe even more experience and knowledge than you have
13 on that?

14 A. I don't know.

15 Q. The European Patent Office has been looking at LTE
16 patents since there was an LTE, right?

17 A. I don't know. I -- oh, yes -- yes, they have, and --
18 yes, they have.

19 Q. So much -- much -- much longer than you have, correct?

20 A. That's correct.

21 Q. They've looked at many more patents, many more LTE
22 patents than you have, right?

23 A. I would presume so.

24 Q. At least in -- in the European Patent Office's view,
25 the group of Ericsson inventors deserved to be recognized

1 for their outstanding contributions to LTE, fair?

2 A. I believe that was what they said.

3 Q. Any reason to dispute that?

4 A. Not as I sit here.

5 Q. Any reason to dispute that Ericsson, even among all
6 other companies in the world, deserves to be recognized for
7 its outstanding contributions to LTE and their patents?

8 A. I can't say that.

9 Q. Can't say one way or the other?

10 A. Are you asking me to say Ericsson's more important than
11 any other LTE company?

12 Q. I don't think that was my question. I think my
13 question, sir, is: Do you have any reason to believe that
14 Ericsson doesn't deserve to be recognized as one of the top
15 contributors to LTE because of its LTE patents of any other
16 company in the world?

17 A. No.

18 Q. One of -- one of the top?

19 A. No.

20 Q. Okay. Dr. Chrissan, the gentleman that IV hired to
21 give opinions on damages in this case, do you know what his
22 name is?

23 A. Walter -- his last name slips my mind.

24 Q. I think it's Walter Bratic.

25 A. Yes.

1 Q. Have you ever met Mr. Bratic?

2 A. Only this week in person.

3 Q. Is it -- is it accurate that you're not sure before you
4 filed your report whether you ever talked to him?

5 A. I don't -- I don't remember the exact sequence. I did
6 have phone calls with him.

7 Q. Is it accurate that you might not ever have talked to
8 him, that it might have been just a phone call with someone
9 else from his company?

10 A. No, I believe he was on the phone call.

11 MR. KUBEHL: I'd like to play Clip No. 40, which
12 is 95:20, through 96:3.

13 MS. FAIR: Objection, Your Honor. He hasn't laid
14 the foundation for impeachment here.

15 THE COURT: Sustained.

16 MR. KUBEHL: Your Honor, I just want to check the
17 testimony for a second.

18 THE COURT: Take a moment.

19 Q. (By Mr. Kubehl) Is it accurate, sir, that before you
20 filed your report, you spoke -- that you don't know for
21 sure whether you spoke to him or someone in his office?

22 A. I believe he was on the call.

23 Q. Whether he was -- was or wasn't on that call, is it
24 accurate that the long and short of the entire
25 conversation that you've ever had with Mr. Bratic was a

1 phone call where you were asked: Do you stand by
2 what's in this report? And you said: Yes.

3 A. That's a good summary. I mentioned two calls -- at my
4 deposition, I mentioned two phone calls.

5 Q. Have you ever -- is it accurate that you've not ever
6 told Mr. Bratic or anyone else that the Ericsson LTE
7 patents, besides the 18 that you looked at, have zero
8 additional value to a licensee?

9 A. I'm sorry. Could you please repeat that question?

10 Q. Sure. You've never told Mr. Bratic or anyone else that
11 the Ericsson LTE patents, besides the 18 that you looked
12 at, have zero additional value to a licensee; is that
13 accurate?

14 A. I'm very sorry, Mr. Kubehl. I do -- can you please --

15 Q. Sure.

16 A. -- ask the question one more time?

17 Q. Sure. You've not ever told Mr. Bratic that you think
18 that the Ericsson LTE patents, outside of the 18 that you
19 looked at, would have no additional value; is that right?

20 A. That's true.

21 Q. Okay. And is it accurate that no one at Mr. Bratic's
22 office or IV has ever asked you that?

23 A. That's true.

24 MR. KUBEHL: I'll pass the witness, Your Honor.

25 THE COURT: Counsel, approach the bench, please.

1 (Bench conference.)

2 THE COURT: Both take a moment and make any
3 adjustments you need to in your outlines. I don't want
4 these patents-in-suit called the Malibu patents again,
5 okay?

6 MR. KUBEHL: Yes, sir.

7 MS. FAIR: Yes, Your Honor.

8 THE COURT: Let's proceed.

9 (Bench conference concluded.)

10 THE COURT: All right. Ms. Fair, you may proceed
11 with your redirect when you're ready.

12 MS. FAIR: Thank you, Your Honor.

13 REDIRECT EXAMINATION

14 BY MS. FAIR:

15 Q. Dr. Chrissan, we heard a little bit about whether or
16 not you believe there's a reservation happening in the
17 DBS-SABE functionality and what you said or didn't say at
18 your deposition. Do you remember that?

19 A. Yes.

20 MS. FAIR: If we could, Mr. Horseman, pull up
21 Dr. Chrissan's deposition. I'd like to take a look at some
22 of the surrounding testimony from the excerpt that we were
23 shown.

24 Q. (By Ms. Fair) Dr. Chrissan, returning to Page 219, and
25 if we'd start at Line 21, and we'll go into page 220.

1 MS. FAIR: If that's all right, Mr. Horseman. Oh,
2 thank you.

3 Q. (By Ms. Fair) So Line 21 to Line 5 of Page 220.

4 And so is it true that you were asked: When a UE
5 sends a buffer status report to the base station and the
6 base station records the amount of data that the UE has
7 reported in its buffers, is that a reservation?

8 And if you can tell the jury, what was your
9 answer?

10 A. That's the way the phone gets a reservation into the
11 base station.

12 Q. And so is it true that you haven't told the Defendants
13 about whether or not a buffer status report is or is not a
14 reservation and what's happening in the DBS-SABE DRX
15 functionality?

16 A. I'm sorry. Could you repeat that? I was reading.

17 Q. Is it true that -- when Mr. Kubehl suggests that you've
18 never been told the Defendants or used the word reservation
19 when describing the DBS-SABE DRX functionality?

20 A. Sorry. One more time.

21 Q. Is it true what Mr. Kubehl was suggesting, and that is,
22 that you haven't used the word reservation before when
23 you've talked about this functionality?

24 A. Well, I certainly used the reservation here.

25 Q. And if we go to Page 222, we see where it was that

1 Mr. Kubehl played the clip at Lines [sic] 15. So he played
2 for us where it ends there at Line 21.

3 This report is purely about how the software
4 operates. I don't think I used the word reservation
5 request in this report.

6 If we go on, you were asked: That would represent
7 your personal opinion, not your expert opinion, that you
8 intend to offer to the jury?

9 And you said: That's my understanding.

10 Is that consistent with what you were saying when
11 Mr. Kubehl was questioning you about this?

12 A. Yes.

13 Q. I want to turn to the patent analysis that we heard
14 some about.

15 You were asked whether you knew whether other
16 patents were part of the ZTE license that Ericsson
17 ultimately executed with ZTE. Do you remember that?

18 A. I believe so.

19 Q. And do you have an understanding of who it was that
20 picked these 18 patents to chart and show to ZTE during
21 these negotiations?

22 A. My understanding is that Ericsson picked those patents,
23 and it's quite possible that Ericsson is the one that
24 called them representative. That's why I answered I don't
25 know to Mr. Kubehl.

1 MR. KUBEHL: Objection. Calls for speculation.

2 THE COURT: Well, the answer is nonresponsive once
3 he talks about it's possible that Ericsson called them
4 representative.

5 The question itself didn't call for speculation,
6 but the answer injected some speculation, and I'll strike
7 that speculative answer from the sentence.

8 Let's proceed.

9 Q. (By Ms. Fair) So, Dr. Chrissan, do you have an
10 understanding of who might have decided that these patents
11 were or were not representative of what was being shown to
12 ZTE?

13 A. My understanding -- yes, I do.

14 Q. And what is that?

15 A. My understanding is that Ericsson chose those patents
16 as representative.

17 Q. And we heard a little bit about how you looked at the
18 patents-in-suit as compared to these 18 Ericsson patents,
19 and Mr. Kubehl criticized you for treating them unfairly.
20 Do you think that's a fair criticism?

21 A. No. I think I treated them fairly.

22 Q. Can you tell this jury why you can be confident that
23 when you looked at the patents-in-suit, you treated them
24 the same way that you treated the 18 Ericsson patents?

25 A. Well, I assessed them in the same way.

1 Q. And how do we know you assessed them in the same way?
2 Can you put some more meat on those bones?

3 A. Based on my 20 years of telecom experience and patent
4 experience primarily, plus the materials that I used to do
5 the analysis.

6 Q. And the last thing we heard about was whether or not
7 you looked at all the technology awards and other patents
8 that Ericsson has in its portfolio. Was that relevant to
9 your analysis?

10 A. No, it wasn't.

11 Q. Did you also fairly not look at the thousands of
12 patents that IV has in its portfolios?

13 MR. KUBEHL: Objection, leading.

14 THE COURT: Restate your question, Ms. Fair.

15 Q. (By Ms. Fair) Was there something else similar that
16 you didn't consider when you were looking at the
17 patents-in-suit that maybe IV has in its portfolios?

18 A. I only considered the materials I said I considered.

19 Q. And so did you look at Ericsson's other patents?

20 A. No.

21 Q. Did you look at IV's thousands of other patents?

22 A. No.

23 Q. And so do you think that your comparison of the
24 patents-in-suit to Ericsson's 18 patents that Ericsson
25 chose to show to ZTE was a fair comparison?

1 A. Yes. I believe my work was a fair comparison of the
2 patents I analyzed.

3 MS. FAIR: I'll pass the witness, Your Honor.

4 THE COURT: Further cross-examination?

5 MR. KUBEHL: Yes, Your Honor.

6 RECROSS-EXAMINATION

7 BY MR. KUBEHL:

8 Q. Dr. Chrissan, in this case, is IV asserting thousands
9 of other patents beyond the three?

10 A. No.

11 Q. And so any rights that Defendants would get in this
12 case, if there was any award, would they get any rights to
13 those thousands of other patents that we just talked about?

14 A. I don't know.

15 Q. Okay.

16 MR. KUBEHL: Could I have Slide 13, please?

17 Slide 13 from Dr. Chrissan's deck, please.

18 Q. (By Mr. Kubehl) This is the slide you showed where you
19 had -- where you identified patents that you thought
20 would -- it's getting late.

21 THE COURT: You don't need to characterize it.

22 Just ask him a question about it.

23 Q. (By Mr. Kubehl) There are three patents on this slide
24 that you created that you say are low novelty, correct?

25 A. That's correct.

1 Q. Those are the patents -- those are the Ericsson patents
2 that you think are likely invalid, correct?

3 A. I did not do -- no, I did not do an assessment of
4 validity.

5 Q. Those are the Ericsson patents that you think likely
6 are obvious or anticipated. Isn't that what you said in
7 your report?

8 A. Yes. I think they were worthy of note that I
9 considered that's a possibility.

10 Q. And so those would be patents that you believe the
11 Patent Office made a mistake in issuing in the first place,
12 correct?

13 A. That's not completely correct.

14 Q. Well, how could they be likely obvious or likely
15 anticipated if the Patent Office didn't make a mistake?

16 A. Well, likely anticipated doesn't mean anticipated.

17 Q. So if, in fact, they were anticipated or obvious, then
18 you'd agree the Patent Office would have made a mistake in
19 issuing these.

20 A. Could you repeat your question?

21 Q. Sure. If, in fact, those patents were obvious, or they
22 were anticipated, then you would agree that the Patent
23 Office would have made a mistake in issuing those?

24 A. Yes, that's generally correct, if you mean invalidated
25 or rendered obvious by the legal means to do so.

1 MR. KUBEHL: Nothing further, Your Honor.

2 THE COURT: You pass the witness?

3 MR. KUBEHL: I pass the witness.

4 THE COURT: Further direct?

5 MS. FAIR: No, Your Honor.

6 THE COURT: You may step down, Dr. Chrissan.

7 THE WITNESS: Thank you, Your Honor.

8 MS. FAIR: Your Honor, may this witness be
9 excused?

10 THE COURT: Is there any objection?

11 MR. KUBEHL: No, Your Honor.

12 THE COURT: Dr. Chrissan, you are excused. That
13 means you're free to leave. You're free to stay. It's up
14 to you.

15 THE WITNESS: Thank you, Your Honor.

16 THE COURT: Thank you.

17 Do I understand the Plaintiff has additional
18 deposition witnesses at this time?

19 MS. HENRY: That is correct, Your Honor.

20 THE COURT: Proceed with your witness by
21 deposition.

22 MS. HENRY: Plaintiff calls by deposition
23 Mr. Kerry Baker.

24 Mr. Baker is a director in network technology over
25 network analytics and benchmarking at T-Mobile USA, Inc.

1 Baker Exhibit No. 3 is PTX-1391. Baker Exhibit No. 8 is
2 PTX-1395. And Baker Exhibit No. 9 is PTX-1396.

3 (Videoclip played.)

4 QUESTION: Could you please state your name and
5 residence address?

6 ANSWER: Kerry Baker, Bellevue, Washington. Do
7 you need full address?

8 QUESTION: No, that's fine.

9 And you're currently employed by T-Mobile; is that
10 right?

11 ANSWER: That's correct.

12 QUESTION: And what is your current position at
13 T-Mobile?

14 ANSWER: I'm a director in network technology over
15 network analytics and benchmarking.

16 QUESTION: Do you have a general number in mind
17 for the number of VoLTE calls that go through the T-Mobile
18 network? Percentage?

19 ANSWER: Yes. I've tracked that.

20 QUESTION: What -- what generally is the current
21 status of the number of VoLTE calls that go through
22 T-Mobile's network?

23 ANSWER: Currently 85 percent of the calls are
24 VoLTE.

25 QUESTION: Okay. Let's look at a document. So

1 I've shown you Baker Exhibit 3 which we've taken off of
2 T-Mobile's website. Could you just scan it and confirm
3 that this looks to you like it came off of T-Mobile's
4 website?

5 ANSWER: Yes, it does.

6 QUESTION: Okay. And there's a reference there to
7 un-carrier network list of firsts. Do you see that --

8 ANSWER: Yes.

9 QUESTION: -- title? What's -- what's the
10 reference to the un-carrier?

11 ANSWER: Un-carrier is the notion that the
12 industry needed change and that the carrier way was rooted
13 in old behaviors.

14 So our CEO, John Legere, took that as a moniker
15 representative of our new brand direction to not be like
16 the carriers. We would be the un-carrier.

17 QUESTION: And does this document reflect at least
18 some of the T-Mobile's network list of firsts that T-Mobile
19 was proud of and used it to distinguish itself as the
20 un-carrier?

21 ANSWER: Yes.

22 QUESTION: Okay. And this document indicates that
23 T-Mobile was the first to launch VoLTE in May of 2014,
24 right?

25 ANSWER: Yes.

1 QUESTION: And that launch provided faster call
2 connections, fast LTE data speeds while on a call, HD
3 voice, and seamless transitions between 2G/4G and LTE
4 networks, right?

5 ANSWER: Yes.

6 QUESTION: I'm going to show you Baker 8, which is
7 first page, TM05404. Have you seen this document or
8 something like it before?

9 ANSWER: Yes.

10 QUESTION: And have you seen this one?

11 ANSWER: Yes.

12 QUESTION: And what is the -- can you explain
13 briefly what the document is? It says: Un-wrap Dallas
14 Network.

15 ANSWER: This was prepared for some leadership
16 visits to the markets for employees -- Dallas employees, in
17 particular, in the first one.

18 For example, Neville Ray, the CTO, I mentioned
19 earlier, would speak to some of these network-related
20 benchmark metrics and performances.

21 QUESTION: So this would be an internal
22 presentation?

23 ANSWER: Yes.

24 QUESTION: And Mr. Ray would -- or did present
25 this to T-Mobile employees?

1 ANSWER: I was not there, but, yes, that was the
2 intention of the document.

3 QUESTION: If you go over to Page 411, there's a
4 reference there to the un-carrier is our response to a
5 stupid, broken, and arrogant industry. Do you see that?

6 ANSWER: Yes.

7 QUESTION: And could -- what's your understanding
8 of what that means?

9 ANSWER: Just what I mentioned earlier, that we
10 had a belief that the carrier approach to wireless was not
11 rooted in a place where it's best for consumers.

12 Overages and limits and penalties and contracts
13 were not the right way to do business. That's stupid,
14 broken, and arrogant. Those are words, I believe,
15 Mr. Legere used on stage at one point in sort of stating
16 our manifesto, the un-carrier.

17 QUESTION: And who is Mr. Legere? I think you
18 already indicated --

19 ANSWER: I'm sorry. I may not have clarified.
20 John Legere, the CEO of T-Mobile.

21 QUESTION: Let's look at another document,
22 Baker 9. 6359 is the first page.

23 Are you familiar with this slide presentation?

24 ANSWER: Yes.

25 QUESTION: Okay. And you authored this; is that

1 fair?

2 ANSWER: Yes.

3 QUESTION: Okay. So if you go over to Page 6361,

4 there's an entry there among three for LTE leadership.

5 Do you see that?

6 ANSWER: Yes.

7 QUESTION: And then there's a reference to 300M

8 LTE covered pops with sub-bullets of L700 coverage and

9 VoLTE quality. Could you explain what that means, please?

10 A. Certainly. 300M is 300 million. It's -- and LTE, of
11 course, the technology we're talking about. And pops is
12 our shorthand for population. So 300 million people
13 covered with our LTE network.

14 L700 refers to the 700 megahertz. It's considered
15 low-band spectrum. The L in front of that just signifies
16 LTE. All 700 coverage.

17 This was a spectrum that got us in -- into
18 low-band competition for coverage purposes. The lower the
19 spectrum, the better the coverage propagation is. We don't
20 need to go into wireless technology characteristics like
21 that. But it was an important spectrum deployment for
22 T-Mobile.

23 VoLTE quality. So VoLTE quality is -- there's two
24 aspects to this. One we've already talked about between
25 technology types, the CDMA versus the GSM path.

1 So as we talked about, VoLTE quality in that case,
2 there were difficulties with hand-overs, dropped calls.
3 You couldn't hand over between those technologies.

4 In this case, VoLTE quality, as we've deployed it
5 in 2014, had a long ways to go when we deployed it. We
6 were early in deployment. We were -- in fact, vendors
7 considered us a global leader in deployment.

8 But that's not to say it was all hunky-dory, if
9 you will. There were very high dropped call rates on
10 initial deployments.

11 Other issues we referred to as one-way audio.
12 Sometimes you can hear them, and they can't hear you.

13 These were early technology issues in the
14 deployment in 2014 and even into 2015.

15 So as we've seen -- mentioned, devices are needed
16 to enjoy the new technologies. As more and more of these
17 devices got out there, we had to race to improve the VoLTE
18 quality. That's why it was listed as a -- a major point of
19 emphasis.

20 QUESTION: And now, over 85 percent of T-Mobile's
21 calls are VoLTE; is that right?

22 ANSWER: That's correct.

23 QUESTION: Let's go over to Page 6367. Do you see
24 the slide titled, Why VoLTE?

25 If you could just review that to yourself, please.

1 So are these points of emphasis about T-Mobile's
2 VoLTE capabilities as of this time in the area of
3 innovation and growth and being technically and
4 economically superior?

5 ANSWER: I'm kind of hung up on the "superiority"
6 word that you used. Typically -- I don't know that these
7 are statements of comparison.

8 QUESTION: I'm looking at -- doesn't it say as one
9 of the columns in the Why VoLTE category, there's a listing
10 of technically and economically superior, and then there's
11 bullet points under that?

12 ANSWER: Sorry. I missed heading on that. I was
13 reading the bullets.

14 QUESTION: And on the -- under the tech --
15 technically and economically superior, it indicated -- and
16 actually, you indicated, because you wrote this document,
17 that VoLTE is the only voice technology for L700 megahertz
18 and critical for T-Mobile getting to 300 million covered
19 pops in 2015, right? Is that what we just talked about?

20 ANSWER: The L700 -- the 700 megahertz, a block
21 spectrum, gave us spectrum in areas that we hadn't had
22 spectrum before. Therefore, as we deploy LTE, there's no
23 voice layer underneath from legacy 3G. So you would need
24 VoLTE to come along with that LTE deployment in order to
25 offer voice in those new geographies.

1 QUESTION: And then as you indicated there and
2 here in this document, VoLTE was critical for T-Mobile
3 getting to 300 million covered pops in 2015, right?

4 ANSWER: That's correct.

5 QUESTION: And in the bottom, there's LTE radio
6 technology approximately three times more efficient than
7 HSPA. Could you explain what that bullet point means?

ANSWER: It would require an engineer to say it correctly, but just to read into it that efficiency, however, we delineate that, let's just say it's three times faster on LTE, just as one aspect of it, than HSPA, which is the high speed packet access - is what that stands for -- and that's the 3G network.

14 QUESTION: Okay. And how did -- and as this
15 document indicated, VoLTE allowed T-Mobile to avoid 15
16 million plus dollars in HSPA investment in 2015 alone; is
17 that fair?

18 | ANSWER: That's what's stated, yes.

19 QUESTION: If you go over to the next page,
20 please, 6368.

21 There's -- the title of the slide is VoLTE Quality
22 in the Industry, T-Mobile Among the Best In The World,
23 right?

1 Ericsson. Does Ericsson supply VoLTE services for
2 T-Mobile?

3 ANSWER: Ericsson is an equipment vendor for our
4 network. I don't know to what extent that reaches into
5 VoLTE technology directly or not.

6 (Videoclip ends.)

7 THE COURT: Does that complete this witness by
8 deposition?

9 MS. HENRY: Yes, Your Honor.

10 THE COURT: All right. Call your next witness.

11 MS. HENRY: Your Honor, as our last deposition, we
12 call by deposition Ms. Evelyn Chen. Ms. Chen is a -- is
13 senior counsel at Ericsson.

14 The clip that is about to be played includes two
15 different sections of two separate depositions of Ms. Chen,
16 one in 2016 and one in 2018.

17 Chen Exhibit No. 5 from her 2016 deposition is
18 DX-529. Chen Exhibit No. 4 from her 2016 deposition is
19 DX-536. And Chen Exhibit No. 4 from her 2018 deposition is
20 PTX-355.

21 THE COURT: All right. Proceed.

22 (Videoclip played.)

23 QUESTION: Good morning, Ms. Chen.

24 ANSWER: Good morning.

25 QUESTION: Who is your present employer?

1 ANSWER: Ericsson, Inc.

2 QUESTION: And how long have you been employed by
3 Ericsson?

4 ANSWER: A little short of three years.

5 QUESTION: When was your first date -- date of
6 employment, to the extent you remember?

7 ANSWER: November 18th, 2013.

8 QUESTION: And what is your current position at
9 Ericsson?

10 ANSWER: Senior counsel.

11 QUESTION: I'm not going to get into your
12 background before that. We'll just focus on your
13 background at Ericsson.

14 So starting -- when you started with the company,
15 what was your position, and generally what was your job
16 responsibility? And if you could take me through up to the
17 present.

18 ANSWER: Sure. It's the same position I hold now,
19 senior counsel. That was when I joined. And I am involved
20 in our IP rights and licensing group generally, and I -- my
21 job entails a variety of responsibilities, including
22 participating in commercial licensing discussions when
23 there are technical discussions regarding patents.

24 And I also work with our internal groups in
25 looking at claim charts that we do send out for our

1 licensing purposes. And upon occasion, I also am involved
2 with Ericsson's offensive patent litigations.

3 QUESTION: And have you been involved in deals
4 regarding licensing of LTE patents?

5 ANSWER: Yes.

6 QUESTION: Could you explain? Give me some
7 background there. What have you been involved in?

8 ANSWER: Generally, I've been involved in -- I'm
9 trying to remember the account. Discussions with ZTE, in
10 technical discussions relating to, I believe, what resulted
11 in a licensed royalty patent.

12 QUESTION: Now, you've mentioned at least twice,
13 technical discussions. What do you mean there?

14 ANSWER: When we do our licensing negotiations
15 process, there is -- we make the opportunity available to
16 our potential licensee to have what we call technical
17 discussions, which are when we discuss patent -- the
18 patents that are to be licensed.

19 In the case where Ericsson is the patentholder,
20 naturally, it would be an offer to discuss Ericsson's
21 patents, claim charts, portfolio strength, and the like.

22 In other situations where there are -- the
23 potential licensee also has patents of its own, we would
24 also discuss their patent portfolio, as well.

25 QUESTION: Discussions about the portfolio

1 strength, the patent portfolio strength, what do you mean
2 there?

3 ANSWER: It kind of depends from account to
4 account exactly what needs to be explained, but Ericsson
5 does have one of the largest standard essential patent
6 portfolios in the industry.

7 And particularly for companies who are relatively
8 new to the market and who may not be as aware or as
9 educated about the standardization process, we try to
10 explain -- give an overview of how standardization works,
11 the technology that is involved in the standardization, and
12 also an explanation of Ericsson's historical involvement
13 and current involvement in standardization and how that is
14 reflected in our patent portfolio.

15 QUESTION: If we look at Exhibit 5 --

16 ANSWER: Uh-huh.

17 QUESTION: -- and that list was selected for ZTE,
18 right?

19 ANSWER: It was sent to ZTE, yes.

20 QUESTION: As we did with Ericsson, let's look --
21 I mean, with Apple, let's look at the -- ZTE. The patents
22 that were charted in Exhibit 4 reflect a subset of the
23 patents that were identified for ZTE in Exhibit 5, right?

24 ANSWER: I believe so.

25 QUESTION: How were the patents that are charted

1 in Exhibit 4 selected to send to ZTE?

2 ANSWER: I wasn't part of that process, so I'm not
3 aware of why these particular patents were chosen.

4 QUESTION: Well, based upon your knowledge of
5 Ericsson's practices, what can you tell me about how these
6 patents were selected to send to ZTE, these patent charts?

7 ANSWER: I think, generally, when we look at
8 exemplary patent claim charts that we would send out, we
9 would consider being able to show the breadth of Ericsson's
10 patents holdings and the particular standard.

11 And so we would probably look at -- I know in some
12 instances, we look at whether or not -- how many areas of
13 the standard could be exemplified in -- in the claim charts
14 themselves so that, you know, when we tell somebody that we
15 are very involved in standardization and have contributed
16 to many aspects of the standard, it's reflected in what we
17 give them to review.

18 QUESTION: What is your understanding of the role
19 of Ericsson's reference price sheets in connection with
20 Ericsson's licensing of its 4G patent portfolio?

21 ANSWER: My understanding is that these reference
22 price sheets were put in place to -- as a guide for us to
23 be more consistent in our initial offers to handset
24 manufacturers.

25 QUESTION: Could you describe in your own words

1 your understanding of what information is reflected in each
2 of the five columns in the two rows labeled LTE single-mode
3 and LTE multi-mode?

4 (Videoclip ends.)

5 MR. RUBENSTEIN: I have a question. The courtroom
6 should be sealed for this portion.

7 MS. HENRY: I apologize. You're absolutely
8 correct. My apologies.

9 Your Honor, it was an oversight. Can we seal the
10 courtroom and back up the clip and replay it? I apologize.

11 THE COURT: I'll order the courtroom sealed. If
12 you're present and not subject to the protective order, you
13 should exit the courtroom at this time until it's unsealed
14 and reopened.

15 (Courtroom sealed.)

16 (Sealed Portion No. 5 saved in separate sealed
17 transcript.)

18 (Courtroom unsealed.)

19 THE COURT: Counsel, approach the bench, please.

20 (Bench conference.)

21 THE COURT: Does Plaintiff have Mr. Bratic next?

22 MS. HENRY: That's correct, Your Honor.

23 THE COURT: And do you intend that to be your last
24 witness in your case-in-chief?

25 MS. HENRY: No, Your Honor, we're also be calling

1 T-Mobile's corporate rep adverse.

2 THE COURT: After Mr. Bratic?

3 Do we have an estimate of both the direct and
4 cross on Mr. Bratic?

5 MS. HENRY: I anticipate the direct will be
6 between 45 minutes and 55 minutes, Your Honor.

7 MR. RUBENSTEIN: My anticipation, Your Honor, is
8 that the cross will be less than 30 minutes.

9 THE COURT: Good. And do we have any idea about
10 the corporate rep?

11 MS. HENRY: Your Honor, I believe that Mr. Ward
12 has been allotted roughly 30 minutes with the corporate
13 rep.

14 THE COURT: We'll cross that bridge when we get
15 there.

16 I'm going to give the jury a short recess, and
17 then we'll do Mr. Bratic -- put him on the stand as soon as
18 we get back.

19 MS. HENRY: Thank you, Your Honor.

20 MR. RUBENSTEIN: Thank you, Your Honor.

21 (Bench conference concluded.)

22 THE COURT: Ladies and gentlemen, we are going to
23 take a short recess at this time. This may well be the
24 last one we get today.

25 Leave your notebooks closed and in your chairs if

1 you will.

2 Don't discuss the case, and follow all my
3 instructions. I will try to keep this short, and we'll be
4 back in here as soon as possible to continue with
5 Plaintiff's next witness.

6 The jury is excused for a recess.

7 COURT SECURITY OFFICER: All rise.

8 (Jury out.)

9 THE COURT: All right. The Court stands in
10 recess.

11 (Recess.)

12 COURT SECURITY OFFICER: All rise.

13 THE COURT: Be seated, please.

14 All right. Plaintiff prepared to call their next
15 witness?

16 MS. HENRY: Yes, Your Honor.

17 THE COURT: All right. Let's bring in the jury,
18 please.

19 COURT SECURITY OFFICER: All rise.

20 (Jury in.)

21 THE COURT: Please be seated.

22 Plaintiffs, call your next witness.

23 MS. HENRY: Thank you, Your Honor.

24 Plaintiffs call Mr. Walter Bratic.

25 THE COURT: If you'll come forward and be sworn,

1 please, Mr. Bratic.

2 (Witness sworn.)

3 THE COURT: Please come around, sir, have a seat
4 on the witness stand.

5 All right. Ms. Henry, you may proceed.

6 MS. HENRY: Thank you, Your Honor.

7 WALTER BRATIC, PLAINTIFF'S WITNESS, SWORN

8 DIRECT EXAMINATION

9 BY MS. HENRY:

10 Q. Mr. Bratic, good afternoon.

11 Will you please -- please introduce yourself to
12 the jury.

13 A. Sure. My name is Walt Bratic.

14 Q. And tell us a little bit about yourself. Where do you
15 live? What do you do for a living?

16 A. I live in Houston, Texas, and I am a financial economic
17 consultant. I work for a company called Whitley Penn,
18 which is a Texas-based accounting, tax, and consulting
19 firm.

20 And at that firm, what I do is I work with
21 clients, large, small, individuals, partnerships, large
22 companies, inventors, for example, and I provide them with
23 accounting, economics, statistical, and financial
24 consulting services where I analyze a lot of information
25 and really try and package it and boil it down and try to

1 makes sense of that information.

2 Q. Mr. Bratic, why are you here to testify today?

3 A. I'm here because I was retained to determine the amount
4 of damages in the form of reasonable royalties that are --
5 that are due and owing Intellectual Ventures, assuming that
6 the three patents-in-suit are valid and have been infringed
7 by the Defendants.

8 Q. And did you prepare a set of slides to help walk the
9 jury through your opinions in this case?

10 A. Yes, I did.

11 Q. Can you please briefly explain for the jury your
12 educational background.

13 A. Yes. Well, briefly, I have -- I have two formal
14 college degrees. I have a bachelor's degree from the
15 University of Pennsylvania in Philadelphia, Pennsylvania.

16 I also have a Master's of Business Administration
17 degree from the Wharton School of Business, which is also
18 at the University of Pennsylvania. So that's the extent of
19 my formal college degrees.

20 Q. Are you a certified public accountant or a CPA?

21 A. Yes. I'm a certified public accountant. I've been
22 licensed by the State of Texas as a CPA since 1981.

23 Q. And are you also what's called a certified licensing
24 professional?

25 A. Yes, I am.

1 Q. What is a certified licensing professional?

2 A. A certified licensing professional is a designation, a
3 license you receive from the Licensing Executive Society of
4 the United States and Canada. And that's an
5 organization -- these days, I think they're about almost
6 10,000 members -- of people who are devoted to issues of
7 licensing of intellectual property rights in the form of
8 patents, trademarks, trade secrets, copyrights, and trade
9 dress.

10 And that organization gives a certification, a
11 license out to people who have shown that they have a lot
12 of experience or demonstrated experience and knowledge
13 about licensing of patent and other intellectual property
14 rights.

15 In my case, I was able to receive that designation
16 without having to take any examinations because I prepared
17 a very long dossier of all my work experience in licensing
18 and references, and they granted me that certification
19 about 12 years ago. But every three years, I have to take
20 some coursework to keep that license up.

21 Q. And have you negotiated licensing -- licenses for
22 clients in the real world?

23 A. Yes. It goes all the way back to 1980. I was the
24 chief financial officer of a technology company. We
25 designed equipment for the energy industry, and we had 40

1 or 50 draftsman and engineers, and we were creating all
2 kinds of products and drawings, and we realized two things.

3 One, that people started knocking on our doors
4 when they learned about our company and asking for our
5 technology. We always realized that we needed licenses for
6 some of our products from other companies.

7 So I cut my teeth back in 1980 to 1982 negotiating
8 10 to 12 licenses -- intellectual property licenses,
9 including patents and trade secrets, for that company where
10 I was the chief technology officer.

11 And that really started my introduction to the
12 world of intellectual property licensing, and I've been
13 doing it ever since 1980.

14 THE COURT: Mr. Bratic, can you slow down some?

15 THE WITNESS: Sure. Sorry.

16 THE COURT: Please talk a little slower.

17 THE WITNESS: Yes.

18 A. So I've been doing that from 1980 through the present.

19 Q. (By Ms. Henry) How long have you worked in the area of
20 patent licensing and patent damages?

21 A. Well, patent licensing going back to 1980. So it's
22 over 35 years. As far as patent damages, it's been around
23 30 years.

24 Q. Do you teach any classes on intellectual property
25 matters?

1 A. I do. Well, I've certainly lectured and given speeches
2 on every continent except Antarctica. I regularly teach
3 courses on intellectual property damages. I've been doing
4 that for 14 or 15 years now at the University of Houston
5 Law School.

6 Q. And have you been on the board of any intellectual
7 property publications?

8 A. Yes, I have.

9 Q. And have you also been appointed by some state courts
10 in Texas to act as a court-appointed expert and examiner?

11 A. Yes -- excuse me. Yes, I have.

12 Q. What does that mean?

13 A. Well, what it means is, sometimes there are
14 situations -- a court-appointed examiner, for example, if
15 there are questions that are unresolved as a result of a
16 lawsuit that the evidence hasn't been -- come out in a
17 normal way, and the Court would hire me as an examiner to
18 go ferret out additional information for the Court. That's
19 the role of an examiner.

20 The role of a court-appointed expert is you have a
21 lawsuit. You have two opposing sides. They have their own
22 damages experts, but, for example, they can't agree on the
23 value of the company.

24 And so the Court, in those instances, would, for
25 example, hire me as the independent expert for the Court.

1 And when the Court adopts my findings, then my findings are
2 binding on the parties by agreement.

3 Q. Now, Mr. Bratic, we've tried to walk through 30 years
4 of experience pretty briefly here today.

5 A. Yes.

6 Q. Did you also put together a document that summarizes
7 all of your experience and publications should the jury
8 want to look at it more closely?

9 A. Yes, I have.

10 Q. And what exhibit is that?

11 A. If you'll see at the bottom of this slide, it says
12 PTX-42.

13 Q. Mr. Bratic, what work did you do in this case to help
14 you determine what a reasonable royalty award would be?

15 A. Well, there are a number of tasks I undertook and
16 investigations I performed. What I've done on this slide
17 is just compressed it all in -- at a very high level.

18 Q. Could you very briefly walk through just some of the
19 highlights of the things you reviewed?

20 A. Sure. Well, obviously, I read some of the pleadings,
21 the legal documents in this case. I reviewed the
22 patents-in-suit when I first began working on this case.
23 Not from a technical perspective, because I'm not a
24 technical expert. And in that regard, for example, I
25 interviewed Dr. Williams and Dr. Chrissan on all technical

1 matters I relied on in this matter.

2 I also interviewed Mr. Paschke, who has also
3 testified here today, about IV's licensing practices and
4 licensing history.

5 There are various depositions of people taken,
6 some of which the clips were played for the jury. I've
7 read, for example, those depositions.

8 There were various license agreements produced in
9 this case, both by Intellectual Ventures and also by
10 Ericsson, that I've reviewed.

11 I did my own industry research on a variety of
12 topics and the evolution, for example, of the -- the
13 wireless industry. There's a lot of discussion in my
14 expert report about that.

15 There were also a significant number of financial
16 records produced in this case by all the parties, by
17 Intellectual Ventures, by Ericsson, T-Mobile, business
18 records, financial statements, and things of that nature.

19 So I reviewed and analyzed those type of documents.

20 And then I issued an expert report in this case, I
21 issued the supplemental report, and I was deposed in this
22 matter.

23 Q. Did you prepare a document that summarizes everything
24 that you reviewed in forming your opinion in this case?

25 A. I did.

1 Q. What exhibit is that?

2 A. That's PTX-44.

3 Q. And I realize I failed to give you your witness
4 binders.

5 MS. HENRY: So, Your Honor, if I may approach and
6 provide the witness binders at this time?

7 THE COURT: You may.

8 Q. (By Ms. Henry) Mr. Bratic, after reviewing all of this
9 information, were you able to reach a conclusion about what
10 a reasonable royalty is in this case?

11 A. I was.

12 Q. And what is your conclusion about the amount of damages
13 owed?

14 A. The amount of damages owed for the period from June
15 3rd, 2014, through the first day of trial in this case,
16 this past Monday, is 77.4 million. Now, that's rounded.
17 The actual number is 77.36 million.

18 Q. Mr. Bratic, I see a number of PTX listed on the bottom
19 of those slides. Are those exhibits that detail out all
20 the calculations that lead into your number?

21 A. Yes.

22 Q. What PTX's are those?

23 A. They would be PTX-1464, 1466, 324, 52, 53, and 57.

24 Q. And can the jury pull those and review those if they'd
25 like to walk through any of your calculations in even more

1 detail than we're going to do today?

2 A. Yes, they could.

3 Q. What is your understanding of the form of damages that
4 are owed to IV in this case?

5 A. In this case, the form of damages would be called
6 reasonable royalties.

7 Q. And where does the term reasonable royalty come from?

8 A. It comes from the patent statute, and what's shown on
9 the screen here is just a clip from the patent statute that
10 says: But in no event less than a reasonable royalty.

11 Q. Can you please explain for the jury, what is a
12 reasonable royalty?

13 A. Yes. A reasonable royalty is -- is really just a form
14 of compensation for payment of the use of one's property.

15 For example, if you're a farmer or landowner and
16 you learn -- you found oil and gas on your -- on your
17 property, an oil company wants to come on your company,
18 drill and extract that oil and gas, they have to pay you
19 rent for taking off that oil and gas. In the oil and gas
20 industry, that's called royalties.

21 Well, likewise, in the world of patent damages and
22 patent licensing, when somebody pays somebody compensation
23 for the use of their patented inventions, that's also known
24 as a reasonable royalty. And that's what I've computed in
25 the form of damages in this case.

1 Q. Are reasonable royalties tied to the amount of use made
2 of the patents by the Defendants?

3 A. In one way or another, yes. And that's -- the most
4 common form of royalty payment is typically payment of a
5 royalty based on the extent of use of the patented
6 technology.

7 Q. Did you utilize any particular methodology in reaching
8 your reasonable royalty conclusion?

9 A. Yes, I did.

10 Q. Please explain that for the jury.

11 A. I used a framework that was called the Georgia-Pacific
12 factors. You'll see this screen. It says the
13 Georgia-Pacific factors.

14 If you look at the very bottom of the screen,
15 it -- these Georgia-Pacific factors are from a very
16 well-known patent infringement case that involved royalty
17 damages back in the very early 1970s. That case was
18 Georgia-Pacific versus U.S. Plywood Corporation.

19 In that case, that Court, because there was an
20 issue of patent infringement, the Court said, in order to
21 determine a reasonable royalty, the Court gave damages
22 experts a guideline to say there are 15 factors to follow
23 and evaluate.

24 Now, the Court also said they don't always apply
25 in every single case, but you should nevertheless check off

1 the box and make -- you know, evaluate them and determine
2 if they're relevant for a particular case.

3 So there are 15 factors. All 15 are rolled up
4 into what's called a hypothetical negotiation. And --

5 Q. Mr. Bratic, what is a hypothetical negotiation?

6 A. Okay. So what happened in the Georgia-Pacific case, as
7 happens in many patent infringement cases, there's no
8 agreement between the parties to a license, and that's
9 why they're -- one of the reasons they're in court.

10 In the Georgia-Pacific case, the Court imposed
11 what the Court called a hypothetical negotiation. It's a
12 pretend scenario where the Court put Georgia-Pacific and
13 U.S. Plywood in a hypothetical negotiation. They sat them
14 down at a hypothetical table and said that the parties were
15 to negotiate a hypothetical license based on the
16 Georgia-Pacific factors.

17 And so that's come down over the years in patent
18 cases to be known as a hypothetical negotiation resulting
19 in a hypothetical license, and that's all based on the last
20 Georgia-Pacific factor, which is Factor 15.

21 Q. Are there any conditions or assumptions that you are
22 supposed to make when considering this hypothetical
23 negotiation?

24 A. Yes. There are a number of guideposts or guidelines
25 that the Courts have evolved over the years regarding the

1 hypothetical negotiation.

2 Q. And are those listed on Slide 7?

3 A. Yes.

4 Q. And the first one says hype -- hypothetical negotiation
5 occurs on the date of first infringement by T-Mobile.

6 Have you determined the date of first infringement
7 in this case?

8 A. Well, it's my understanding that the date of first
9 infringement occurred in this case on February -- in the
10 month of February 2013.

11 Q. And do the Defendants agree that that's the date on
12 which the hypothetical negotiation should take place?

13 A. Yes, they do. That's my understanding.

14 Q. Mr. Bratic, at the time of the hypothetical negotiation
15 in this case, how many of the patents-in-suit had issued?

16 A. At the time of the hypothetical negotiation, two of the
17 patents-in-suit had issued, all but the first two, other
18 than the '206.

19 Q. And had the application for the '206 patent been filed?

20 A. Yes, the application for the '206 re-examination
21 patent, I believe, was filed some time in 2010, roughly
22 three years before the date of first infringement.

23 Q. Is the '206 patent what's called a re-issued patent?

24 A. It is.

25 Q. And what does that mean, a re-issued patent?

1 A. Well, I'm not going to give you -- I'm not a lawyer, so
2 I can't give you a legal --

3 Q. Just at a high level.

4 A. But as a layman, what my general understanding of a
5 re-issued patent is that the underlying patent was subject
6 to some questions about -- issues about the claims, and so
7 the inventor had to go back and resubmit the patent with
8 modified claims. And then those modified claims, if
9 accepted by the PTO, come out as a re-issued patent.

10 THE COURT: Counsel, approach the bench, please.

11 (Bench conference.)

12 THE COURT: I've had Mr. Bratic several times
13 testify before me. I do not know how to slow him down, but
14 he needs to slow down.

15 MS. HENRY: I'll tell him, Your Honor, and I will
16 do my best --

17 THE COURT: And perhaps if you will at least catch
18 a breath between his answers, that will help, as well.

19 MS. HENRY: Yes, Your Honor.

20 THE COURT: All right. Let's proceed.

21 MS. HENRY: Thank you.

22 MR. RUBENSTEIN: Thank you, Judge.

23 (Bench conference concluded.)

24 THE COURT: Let's proceed.

25 Q. (By Ms. Henry) Mr. Bratic, for the benefit of the

1 court reporter and for the jurors and everyone else
2 listening, can you make an effort to keep your answers --
3 to slow down just a little bit?

4 A. Sure. I'm sorry.

5 Q. I'll make the same effort. I admit, it's one of my
6 flaws, as well.

7 A. I'll do my best.

8 Q. So, Mr. Bratic, you mentioned a re-issued patent. At
9 the time of the hypothetical negotiation in this case,
10 would all of the parties to the negotiation have been aware
11 of the scope of the claims that would ultimately issue as
12 the '206 patent?

13 A. Yes, they would.

14 MS. HENRY: I apologize. Could I have the slide
15 presentation again? Thank you, Ms. Lockhart.

16 Q. (By Ms. Henry) Now, there are a couple of other
17 assumptions listed here on Slide 7. Could you please just
18 very briefly walk the jury through those?

19 A. Yes. One of the other guidelines for the hypothetical
20 negotiation is that all the parties to the hypothetical
21 negotiation, the patent owner and the alleged infringers,
22 are all to accept the premise that the patents-in-suit are
23 valid and have been infringed.

24 The negotiation, it's considered to be an open
25 book. In other words, there are no secrets. Everybody

1 knows what the other party knows. That's very different
2 than the real world where in license negotiations, often
3 stuff -- you hold information back because you don't want
4 to share all your information.

5 There's also a concept called the book of wisdom,
6 which is that at the time of the hypothetical negotiation
7 in February 2013, the parties could consider information
8 that wasn't actually known in 2013 but for events that
9 happened later in time, but that information could be
10 superimposed on the parties, and they could consider it.

11 In the end, part of the hypothetical negotiation
12 or the premise of it is to agree to a reasonable royalty
13 rate. And as a result, the licensees -- the Defendants
14 would receive a license to the patents-in-suit.

15 Q. Mr. Bratic, what is the equation that we see here on
16 Slide No. 8?

17 A. This is a common formula that is used to evaluate and
18 determine reasonable royalties based on the extent of use
19 made of the patented technology. And you'll see there's a
20 royalty rate which is determined by following the guidance
21 of the Georgia-Pacific factors. You would multiply that by
22 what's called a royalty base.

23 The royalty base in this case would be the number
24 of LTE subscribers per month, which I'll be explaining a
25 little later. But when you multiply the royalty rate times

1 the base, which is the extent of use, that will give you
2 the total amount of reasonable royalty.

3 Q. Here we have again on Slide 9 -- are these the
4 Georgia-Pacific factors that you mentioned earlier?

5 A. They are.

6 Q. And it looks like they've been sort of rearranged and
7 put into various groups. Can you explain why the jury --
8 to the jury why you've done that?

9 A. Yes. I put them in buckets -- different buckets
10 because when you look at them, some of them have common
11 themes. So it's easier to discuss them when you group them
12 in buckets based on common themes, so I reshuffled the
13 numbering sequence.

14 Q. Let's talk first about the commercial success bucket.
15 What are you considering when you're talking about the
16 commercial success Georgia-Pacific factors?

17 A. Well, some of the things you would consider would be
18 the -- what are the advantages, the teachings, the benefits
19 of the patents-in-suit, the benefits to the infringer, the
20 benefit to the customers and the infringers, the extent to
21 which use has been made of the patented technology, the
22 profitability of the products or services embodying the
23 patented technology, and other considerations, such as
24 contributions that infringers or the infringers or licensee
25 has actually made to the infringing product or service.

1 Q. How did you go about determining the benefits of the
2 patents-in-suit?

3 A. Well, I interviewed Dr. Williams, I interviewed
4 Dr. Chrissan, and I read their expert reports.

5 Q. And what were you able to determine about the benefits
6 of the patents-in-suit from your interviews with
7 Dr. Williams and Dr. Chrissan, as well as reviewing their
8 expert reports?

9 A. Well, I learned that there was a significant
10 improvement in the quality of service, QoS, of an LTE
11 network.

12 I also learned that the patented technology
13 allowed for efficient transition -- transmission of
14 different types of information on an LTE network in the
15 form of video packets, voice data, messaging packets.

16 This also allowed -- the patents-in-suit allowed
17 for the increase of network capacity. And what I mean by
18 that is taking the existing network capacity based on the
19 amount of equipment and infrastructure in place and
20 stretching it out, expanding it, and making it more robust,
21 more efficient, and basically squeezing -- squeezing more
22 out of every dollar of investment made in that network.

23 Q. Were you in the courtroom earlier today when
24 Dr. Williams and then Dr. Chrissan talked about the
25 importance of the patents-in-suit to VoLTE?

1 A. Yes, I was.

2 Q. And can you just briefly remind us, what does VOLTE
3 stand for, again?

4 A. Well, VOLTE stands for Voice over LTE, so it's the
5 transmission, as I understand it, of voice packets over an
6 LTE network.

7 Q. Mr. Bratic, how do the benefits of the patents-in-suit
8 help a service provider like T-Mobile?

9 A. Well, it helps them several ways. One, it helps with,
10 obviously, customer satisfaction and customer retention.
11 In the wireless industry, these carriers all compete for
12 customers, and there's a finite number of people in the
13 United States.

14 So there's a thing called churn, which is where
15 customers will switch from one subscriber to another. So
16 if you're able to provide real high quality of service,
17 given the amount of money you charge, you're going to have
18 happier customers, and they tend to stay longer with the
19 company, so you can get more revenues and profits from that
20 LTE subscriber.

21 The other thing, of course, is it helps with the
22 profitability of the company because you're able to use
23 your resources much more efficiently and don't have to go
24 out and buy as much equipment. So that helps make, the
25 carrier, in this case, T-Mobile, more profitable than it

1 otherwise would be.

2 Q. And do the patents contribute to the efficiency of
3 T-Mobile's network?

4 A. As I understand it, that would be the case.

5 Q. What is your understanding of what the impact would be
6 on T-Mobile if they weren't able to utilize the technology
7 in the patents-in-suit?

8 A. Well, they'd have to go out and spend tens of millions
9 of dollars of money on buying more infrastructure equipment
10 to service the same number of customers as they're able to
11 do as a result of practicing the patents-in-suit.

12 Q. And were you in the courtroom earlier today when
13 Dr. Williams testified about what he believed roughly how
14 much that would cost them?

15 A. Well, he -- he categorized it, yes, in terms of a
16 percentage of capacity.

17 Q. And what did Dr. Chrissan say that T-Mobile would have
18 to -- how much -- excuse me. I'm going to start over.

19 What did Dr. Chrissan say that T-Mobile would have
20 to increase their infrastructure in order to service the
21 same number of clients if it didn't have the benefits of
22 the patents-in-suit?

23 A. In the order of 20 to 25 percent more investment in
24 equipment and infrastructure.

25 Q. The final bullet point here says: No non-infringing

1 alternatives. What is a non -- non-infringing alternative?

2 A. So a non-infringing alternative would be, at the time
3 of first infringement, back in February 2013, the parties
4 would sit down and look to are there alternatives that the
5 infringers would have to be able to provide the same
6 benefits provided by the patents-in-suit, but without
7 practicing the patents-in-suit themselves.

8 And that's -- so that is the concept behind
9 non-infringing alternatives.

10 Q. Did you discuss the potential of non-infringing
11 alternatives with Dr. Williams?

12 A. Yes.

13 Q. And what is your understanding of whether or not
14 non-infringing alternatives exist for the patents-in-suit
15 at the time of the hypothetical negotiation?

16 A. Well, according to Dr. Williams, there were no
17 non-infringing alternatives that would allow for and
18 provide for the same benefits provided by the
19 patents-in-suit.

20 Q. Mr. Bratic, did you see any documents from T-Mobile
21 that solidified for you the benefits of the
22 patents-in-suit?

23 A. Yes, I saw several documents.

24 Q. What is PTX-1387?

25 A. This is an internal T-Mobile document.

1 Q. And -- and what does it show?

2 A. Well, it discusses that they were -- T-Mobile was
3 looking at their capacity, and they -- as you see
4 highlighted in the first bullet, they were looking at a
5 trajectory of demand, they were looking at the demand
6 curve, and they were saying that they expected demand to
7 exceed capacity in the beginning of 2015, which would
8 impact a number of their markets across the United States.

9 Q. Could T-Mobile simply buy more spectrum to deal with
10 that issue?

11 A. No, not necessarily because spectrum doesn't become
12 available just anytime you want to go out and buy it,
13 because it's -- as was explained, it's regulated by the
14 government. So there's a finite amount of spectrum, and
15 it's very expensive.

16 Q. Does -- can you please read the second bullet point on
17 PTX-1387?

18 A. Yes. The second bullet says: The planned spectrum
19 purchases insufficient to close demand/capacity imbalance.

20 Q. And even if -- even if T-Mobile could buy more spectrum
21 to help fix this capacity crunch, is spectrum expensive?

22 A. It's very expensive.

23 Q. Do you have any idea how expensive?

24 A. Well, it can run into hundreds of millions of dollars
25 to in the billions of dollars.

1 Q. So if T-Mobile can't buy more spectrum to meet its
2 growing demand, what were its options?

3 A. Well, its option was to stagnate, in other words, to
4 limit the number of customers it could take on, given its
5 finite network, or it could implement technologies that
6 would help take its existing network and stretch it and
7 make it more efficient to accommodate that increased demand
8 for -- for its network.

9 Q. And did the patents-in-suit help T-Mobile make its
10 spectrum more efficient?

11 A. Yes.

12 Q. Did you see documents that confirmed that?

13 A. Yes.

14 Q. Mr. Bratic, what is PTX-1396?

15 A. This is another internal T-Mobile document.

16 Q. And what does it say?

17 A. Well, in the highlighted part in the top right, it
18 said: VoLTE only voice technology for L7 megahertz [sic]
19 and critical for us getting to 300M, which is millions,
20 covered pops in 2015.

21 Q. And is VoLTE -- excuse me -- are the patents-in-suit
22 instrumental to the implementation of VoLTE?

23 A. That's my understanding.

24 Q. And does VoLTE help T-Mobile maximize its spectrum
25 efficiency?

1 A. Yes, it does.

2 Q. Are there any other benefits to VoLTE that you see
3 highlighted in PTX-1396?

4 A. Well, yes. They pointed out here, as I've called out
5 here, they said that it avoids 50 million plus in HSPA
6 investment in 2015 alone.

7 So they noted that by implementing VoLTE, they
8 were able -- because they were able to migrate VoLTE or
9 voice communications over to the LTE network, that freed up
10 HSPA, which is a form of the 3G network -- freed it up so
11 they wouldn't have to invest more than \$50 million in that
12 one year alone to expand to 3G network.

13 Q. When did T-Mobile launch VoLTE?

14 A. It launched it in late spring, early summer of 2014.

15 Q. All right. And at the top, it says that VoLTE was
16 critical for getting us to 300 million covered pops.

17 Do you see that?

18 A. Yes.

19 Q. Were you in the courtroom when the deposition testimony
20 of Mr. Baker from T-Mobile was played?

21 A. Yes, I was.

22 Q. And did he explain what getting to 300 million pops
23 meant?

24 A. Yes.

25 Q. Okay. What does that mean to you?

1 A. Well, it means that all these companies -- and what I
2 mean these companies, these carriers, like T-Mobile and its
3 competitors, like AT&T, Verizon, Sprint, they want to have
4 a national network for all their -- whether it was -- when
5 it was 2G, when it was 3G, now 4G or LTE, they want to have
6 a national network because they want to provide that
7 network with national coverage to attract as many
8 subscribers as they can.

9 And there's about, depending -- the census hasn't
10 come out yet, it will come out next year, but there's
11 somewhere around 330, 340 million people in the United
12 States. So 300 million people covered in the LTE network
13 is pretty much covering most of the United States coast to
14 coast.

15 Q. Mr. Bratic, did you also consider the commercial
16 success of the accused functionality in T-Mobile's network?
17 A. I did.

18 Q. What do we see here on Slide -- the slide that's
19 sourced from PTX-53?

20 A. What we see is, this is a bar chart just showing by
21 year since the implementation of LTE -- or since the
22 beginning of, I should say, time of infringement, I looked
23 at the number of LTE subscribers that T-Mobile had by year.

24 Q. And how many LTE subscribers did T-Mobile have in 2014?
25 A. They had 17 million.

1 Q. And how many LTE subscribers does T-Mobile have in
2 2019?

3 A. They had 66 million, so that's an increase of almost
4 400 percent.

5 Q. Did you analyze whether or not T-Mobile's LTE services
6 were profitable?

7 A. I did.

8 Q. How did you go about making that analysis?

9 A. Well, T-Mobile produced a number of financial
10 records -- its financial statements for its U.S. operation.

11 So I analyzed those financial statements, and I
12 was able to estimate the profitability of the LTE network
13 during the infringement period.

14 Q. And did that profitability increase between 2014 and
15 2019?

16 A. It did. It almost tripled.

17 Q. What is -- excuse me.

18 What does that tell you? Why is that important to
19 you?

20 A. Well, because -- it's important to me because although
21 I didn't consider the profitability in terms of determining
22 the amount of reasonable royalties, what it told me as part
23 of my analysis -- first of all, it's a required analysis
24 under Georgia-Pacific to look at the profitability of the
25 products or services incorporated in the patents, but also

1 it indicated to me that they -- T-Mobile could pay
2 royalties and still maintain healthy profits even after
3 paying those royalties.

4 Q. Mr. Bratic, what is included in the licensing
5 characteristics bucket?

6 A. So the licensing characteristics under Georgia-Pacific
7 deal with looking at various licenses. For example,
8 looking at licenses that the patent owner has issued for
9 the patents-in-suit, looking at licenses issued by the
10 Defendants, and looking at customary licenses for similar
11 technology -- in this case, for example, LTE technology.

12 Q. Are you aware of whether or not IV has licensed its
13 portfolio of patents which includes the patents-in-suit?

14 A. Yes.

15 Q. Has IV licensed its patents to any competitors of
16 T-Mobile?

17 A. It has.

18 Q. Who specifically has IV licensed its portfolio of
19 patents to?

20 A. You mean regarding competitors?

21 Q. Yes, regarding competitors.

22 A. It would be -- to my understanding, it would be AT&T
23 and Verizon.

24 MS. HENRY: Your Honor, at this time, I'm going to
25 ask to seal the courtroom. We're about to get into the

1 confidential licensing information of both IV and then
2 shortly following that, of Ericsson.

3 THE COURT: All right. Based on counsel's
4 request, I'll order the courtroom sealed.

5 Those present who are not subject to the existing
6 protective order entered in this case should excuse
7 themselves and remain outside until the courtroom is
8 unsealed.

9 And, counsel, if you'll let me know when you've
10 completed your examination regarding any confidential
11 information.

12 MS. HENRY: Yes, Your Honor.

13 (Courtroom sealed.)

14 (Sealed Portion No. 6 saved in separate sealed
15 transcript.)

16 (Courtroom unsealed.)

17 THE COURT: All right. The courtroom is unsealed.
18 You may proceed, Ms. Henry.

19 Q. (By Ms. Henry) Mr. Bratic, does the \$5.00 per device
20 royalty we just calculated, does that represent the value
21 of only the patents-in-suit?

22 A. No. It doesn't represent the value of the
23 patents-in-suit. It represents the value attributed to
24 Ericsson's LTE patent portfolio.

25 So you have to take the next step of apportioning

1 that \$5.00 royalty based on the LTE Ericsson royalty rates
2 to just the three patents-in-suit.

3 Q. And did you do that by relying on the technical
4 analysis performed by Dr. Chrissan?

5 A. I did.

6 Q. Did Dr. Chrissan perform an analysis comparing 18 of
7 Ericsson's U.S. LTE patents to the three patents-in-suit?

8 A. Yes, he did.

9 Q. Do you know where those 18 Ericsson patents came from?

10 A. Yes.

11 Q. Where did they come from?

12 A. Well, these were 18 Ericsson U.S. patents. They were
13 what they call charted, and what that -- what I mean by
14 that is claim charts were prepared by Ericsson of these 18
15 Ericsson LTE U.S. patents, and then they were -- those
16 claim charts were then sent to ZTE when Ericsson was in
17 negotiations with ZTE for ZTE to take a license.

18 Q. Who picked those 18 U.S. patents?

19 A. Ericsson did.

20 Q. And do you have an understanding of whether or not
21 those 18 U.S. patents are representative of the value of
22 Ericsson's entire LTE U.S. portfolio?

23 A. Yes, I do.

24 Q. Where did you get that understanding?

25 A. From the testimony -- the witness statements of

1 Ericsson personnel.

2 Q. And, Mr. Bratic, if the jury would like to look at the
3 specific claim charts provided to ZTE, can they find those
4 at DTX-536?

5 A. Yes.

6 Q. Okay. You mentioned you relied on the testimony of
7 some of Ericsson's own witnesses. Were you present in the
8 courtroom when the testimony of Ms. Chen was played earlier
9 today?

10 A. Yes, I was.

11 Q. And do we see on the slide an excerpt from some of that
12 testimony?

13 A. Yes.

14 Q. Okay. And can you please read the highlighted
15 portions?

16 A. Sure. It says here: Exemplary patent claim chart that
17 we send out, we would consider being able to show the
18 breadth of Ericsson's patent holding -- and then it goes on
19 to say: How many areas of the standard could be
20 exemplified in the claim charts.

21 Q. Did you consider similar statements made by other
22 Ericsson employees about whether or not claim charts
23 provided during licensing negotiations are representative?

24 A. Yes.

25 Q. Is this one of those witness statements you relied on?

1 A. It is.

2 Q. Okay. Who is Patricio Delgado?

3 A. I understand he was a director in Ericsson's
4 intellectual property licensing group.

5 Q. And did he provide a sworn witness statement?

6 A. Yes.

7 Q. And did you review and rely on that witness statement?

8 A. I did.

9 Q. Can you please read the highlighted portions of that
10 witness statement.

11 A. Yes. It says: Ericsson's executed licenses are the
12 end result of a process that spans many months and
13 sometimes years.

14 In my experience, the process has begun with
15 technical discussions where, at the prospective licensee's
16 request, Ericsson presents claim charts to the prospective
17 licensee showing how a representative sample of Ericsson's
18 patents are essential to the standard.

19 Q. So is the term representative sample, is that an
20 Intellectual Ventures term or an Ericsson term?

21 A. No. That's an Ericsson term.

22 Q. Did you see other statements from Ericsson employees
23 that matched the statements of Mr. Delgado and Ms. Chen?

24 A. Yes. Excuse me. Yes.

25 Q. Is the witness statement of a Mr. Luke McElroy?

1 A. Yes, it is.

2 Q. Who is Luke McElroy?

3 A. He is a former Ericsson director of licensing.

4 Q. And what did he have to say about Ericsson's licensing
5 practices?

6 A. Well, he kind of echoed some of the things that were
7 said in the previous witness statement and, of course, the
8 statement -- testimony by Ms. Chen.

9 The highlight here states: The first phase -- so
10 he indicates there are two phases -- the first phase
11 comprising an exchange of claim charts and several rounds
12 of technical discussions and analysis with prospective
13 licensees gives the parties to the negotiation an
14 opportunity to assess the strengths and weaknesses of the
15 portfolio of patents to be licensed. And in parenthesis,
16 it says: The technical discussion phase.

17 And then it goes on to say: Against the backdrop
18 of their respective technical assessments, the parties
19 begin the business discussion phase to negotiate specific
20 terms of the prospective license.

21 Q. And, Mr. Bratic, does Mr. McElroy's discussion of a
22 two-phase negotiation, beginning with technical discussions
23 and ending in business discussions, is that consistent with
24 your understanding of how licensing works in the real
25 world?

1 A. Yes.

2 Q. And is -- are the statements of Ericsson's earlier
3 witnesses discussing the use of representative patents for
4 a larger portfolio, is that consistent with your
5 understanding of how licensing practices happen in the real
6 world?

7 A. Well, certainly. When you have multiple patents, yes.

8 Q. Mr. Patent -- excuse me, Mr. Bratic, were you in the
9 courtroom when Dr. Chrissan testified and provided what we
10 see on Slide 27 to the jury?

11 A. Yes, I was.

12 Q. Okay. And did you rely on Dr. Chrissan's technical
13 evaluation of the patents-in-suit in comparison to
14 Ericsson's 18 representative patents?

15 A. Yes.

16 Q. Okay. How did you use that analysis?

17 A. Well, he explained the relative value of three
18 patents-in-suit to the A level and B level patents. And
19 he, of course, determined the low-level patents. There
20 were three A level patents, seven B level patents, and
21 eight what he called low level patents, but he gave a
22 technical weighting of the three patents-in-suit to the
23 A level patents. And I believe that ranged from one and
24 two-thirds. One, a patent-in-suit was -- the
25 patents-in-suit were technically as valuable as one and

1 two-thirds of the A level patents to as much as 2.5 of the
2 A level patents.

3 And then for the B level patents, he said the
4 three patents-in-suit were technically as valuable as 5 to
5 6 of the B level patents, of which there were seven.

6 So I used that information and did some algebra
7 and determined that that technical weighting of comparing
8 by Dr. Chrissan of the patents-in-suit to the 18 Ericsson
9 U.S. charted patents would result in a ratio or a
10 percentage where the patents-in-suit represent a range of
11 31.3 to 41.7 percent of the value of the 18 Ericsson U.S.
12 charted patents. And that's represented by the pie chart.

13 Q. What number within that range of 31.3 percent to
14 41.7 percent did you ultimately determine to rely on in
15 your analysis?

16 A. I used the low end of the range. I used what you see
17 that red pie -- piece of the pie, the 31.3 percent.

18 Q. And are your calculations contained in PTX-1466?

19 A. Regarding this subject, yes.

20 Q. Thank you.

21 What was the next step in your analysis?

22 A. Well, I began with that \$5.00 per device or per handset
23 royalty rate -- again, an LTE royalty -- royalty rate. I
24 now applied Dr. -- the calculation I performed based on
25 Dr. Chrissan's technical analysis, and then I only took

1 31.3 percent of the \$5.00 royalty to apportion it down to
2 \$1.56 as a device or handset royalty apportioned for only
3 the patents-in-suit.

4 So that \$1.56 represents the royalty rate per
5 device for an LTE device representing the value of the
6 patents-in-suit in the device.

7 Q. So now that we have a per device rate --

8 A. Right.

9 Q. -- do you believe that a per device rate is what's
10 appropriate in this case?

11 A. No, that's not where the analysis stops.

12 Q. Okay. So how did you -- well, first of all, tell us
13 why is that.

14 A. Well, I understand that handsets or devices themselves
15 don't infringe the -- the asserted patents and the method
16 claims being asserted within those patents.

17 What I understand is infringing or claimed to be
18 infringing is the LTE wireless network that's been
19 implemented by -- by T -- by T-Mobile.

20 So the task I had to do was to figure the extent
21 to which that T-Mobile wireless LTE network was being used.
22 And so I had to then take the device royalty because the
23 device connects with the LTE network in order for customers
24 to enjoy the benefits of that LTE wireless network.

25 So I then had to figure out how often or how much

1 would a device be used during its life.

2 Q. So did you attempt to take a per device rate and turn
3 it into a per subscriber rate?

4 A. That's exactly what I did.

5 Q. And how did you go about doing that?

6 A. Well, I did some research, and I came across an article
7 from a company called Recon Analytics, a research company.
8 And they indicated that on average in the U.S., customers
9 hold on to their handsets or devices, mobile devices, for
10 just under 25 months, 24.9 months.

11 Q. And did you get this 24.9 months number from PTX-324?

12 A. Yes.

13 Q. All right. So now that we have a per device rate and
14 we know the average life of the device, did you then
15 calculate the royalty rate based on that?

16 A. I did.

17 Q. Okay. And did that end up being 6.3 cents?

18 A. Yes. So I took the \$1.56, which was the device royalty
19 based on -- strictly on the value of the patents-in-suit.
20 I divided by 24 point -- months, and that gave me a royalty
21 per subscribers per month in the LTE network of 6.3 cents.

22 Q. And are those calculations contained in PTX-1466 and
23 PTX-324?

24 A. Yes, they would be found there.

25 Q. Okay. This says royalty rate per LTE subscriber per

1 month. So are you applying this rate to every individual
2 subscriber on each individual month?

3 A. I'm applying it to the number -- I will apply it in the
4 formula to the number of LTE subscriber months during the
5 infringement period.

6 Q. Let's look at the third Georgia-Pacific bucket. What
7 does this contain?

8 A. Well, this talks about the relationship -- Factor 4 and
9 5 talk about basically whether or not the patent owner
10 would be willing to license, and in this case, IV has
11 obviously licensed the patents-in-suit on a number of
12 occasions, as well as other patents. So they clearly have
13 a willingness to license their technology.

14 Factor 5 talks about looking at the relationship
15 between the parties. In this case, IV doesn't compete with
16 T-Mobile/Ericsson because IV doesn't provide an LTE
17 network, and they don't make infrastructure equipment.

18 So they would benefit -- IV -- Intellectual
19 Ventures would benefit by granting a license to the
20 Defendants because they would collect some form of royalty
21 income.

22 Q. And, finally, what about the final Georgia-Pacific
23 bucket?

24 A. Well, the last bucket deals with Factors 14 and 15.

25 Factor 14 deals with the opinion of experts, and

1 in that case, I relied on Dr. Chrissan and Dr. Williams for
2 technical matters in this case.

3 And the last factor is Factor 15, which takes us
4 back to that hypothetical negotiation we talked about where
5 all the 14 factors get kind of rolled up into Factor 15.

6 Q. So now that we've walked through the first 14
7 Georgia-Pacific factors, are we back at the hypothetical
8 negotiation table?

9 A. Yes.

10 Q. And are -- what are the highlights of the information
11 that you believe the parties would be considering when they
12 were sitting at that negotiation table?

13 A. Well, some of the factors that the parties would be
14 certainly aware of would be, again, the presumption that
15 everybody has to accept the fact the patents are valid and
16 have been infringed. The parties would be aware that LTE
17 is provide -- the LTE network that T-Mobile operates is
18 made very efficient and that T-Mobile's competitors have
19 licenses to those networks -- to those patents and are
20 competitors, and they offer competitive LTE services.

21 The patents-in-suit enabled improvement in network
22 efficiency, quality of savings, as well as kind of the more
23 efficient capacity and bandwidth savings.

24 Ericsson, they certainly would know from the price
25 reference sheets that Ericsson had sought royalties as high

1 as \$8.00 a device. They would -- certainly would be aware
2 of and certainly IV would accept that there were no
3 non-infringing alternatives to the patented technology in
4 order to get the benefits of the patents.

5 And, finally, I believe the parties would agree to
6 a royalty rate of 6.3 cents per LTE subscriber month.

7 Q. Mr. Bratic, is it your opinion that 6.3 cents per LTE
8 subscriber per month is the royalty rate that the parties
9 would have agreed to at the hypothetical negotiation for
10 all three patents?

11 A. Yes.

12 Q. Okay. And is that rate the same regardless of whether
13 or not there is a single patent or all three patents
14 infringe at any given time?

15 A. That rate would be the same. It would be a portfolio
16 royalty which would have been negotiated in February of
17 2013.

18 Q. Why is that?

19 A. Well, as we talked about earlier, the parties would
20 have been aware in February of 2013 that two of the patents
21 had already issued. The third patent hadn't issued, but it
22 had -- the application was already pending. And under the
23 book of wisdom, they would know that that patent would
24 issue. And they would know that -- that the Defendants
25 would need a license to all three patents.

1 And consistent with Ericsson's license practice of
2 granting a patent for a portfolio rate and not changing it,
3 whether you're adding or subtracting patents for it, I
4 believe the parties would have settled on the 6.3 --
5 6-cent -- 6.3-cent royalty per subscriber month.

6 Q. So, Mr. Bratic, we're now back at the formula that
7 you talked about earlier. I see that we've got the
8 royalty rate here at 6.3 percent, and now we need the
9 royalty base.

10 Very briefly, how did you calculate the royalty
11 base?

12 A. Well, I looked at the number -- I determined the amount
13 of the number of LTE subscribers that Ericsson -- excuse
14 me -- that T-Mobile had based on information T-Mobile
15 provided and information that Ericsson had about --
16 estimates Ericsson had of how many people in the United
17 States and North America use LTE and other networks.

18 So I was able to use that to estimate the number
19 of Ericsson LTE subscribers during the infringement period
20 from June 2014 through the date of trial.

21 Q. And I see at the top of this, it says: LTE Subscriber
22 Months, 2.4 billion.

23 A. Yes.

24 Q. Did you use all 2.4 billion subscriber months as your
25 damages base?

1 A. No.

2 Q. I mean as your royalty base?

3 A. No, I didn't.

4 Q. And why not?

5 A. Well, because I recognized that about half, about
6 50 percent of the base stations that are used on T-Mobile
7 networks were licensed to Nokia.

8 So I only focused on the un-licensed radio base
9 stations, which I had assumed the un-licensed ones were the
10 Ericsson radio base stations.

11 So I multiplied the 50 percent times the 2.4
12 billion, and that gave -- reduced it by half to tell me
13 that there were 1.2 million LTE subscriber months during
14 the infringement period.

15 And a subscriber month, I might just explain, is
16 when you take one subscriber, for example -- and an LTE
17 subscriber, they're a subscriber for a year. That's 12
18 subscriber months.

19 So then if you have a million LTE customers, for
20 example, that would be 120 million subscriber months in one
21 year. So the numbers get big quickly just because you have
22 many, many months of use of an LTE network.

23 Q. And I think you said that there were 1.2 million
24 subscriber months. Did you mean 1.2 billion?

25 A. Billion.

1 Q. Okay. So now that we have the royalty rate of 6.3
2 cents per subscriber per month, we have the royalty base of
3 1.2 billion LTE subscribers per month, what is your opinion
4 about what a reasonable royalty is in this case?

5 A. Well, rounded, the number is \$77.4 million.

6 Q. Did you then do any calculation to determine how much
7 of those damages took place before this lawsuit was filed,
8 and how many of those damages took place after the lawsuit
9 was filed?

10 A. Yes. I broke down the total royalty.

11 Q. Okay. And how many -- how much of those damages
12 happened before the lawsuit was filed?

13 A. Okay. So before August 9, 2017, the total royalties
14 for that period would be \$43,718,664.00.

15 Q. And what about after the lawsuit was filed?

16 A. For the period after August 9, 2017, it would be
17 \$33,649,897.00.

18 Q. And does that get you to your total damages award of
19 77.4 million?

20 A. Yes, which I said is, again, a rounded number. It's
21 77.36 million.

22 Q. Mr. Bratic, considering all of your experience,
23 considering all of the documents reviewed -- you reviewed
24 and considering all the calculations that we've walked the
25 jury through in pretty exhaustive detail, is it your

1 opinion that \$77.4 million is a reasonable royalty to pay
2 to IV for T-Mobile and Ericsson's infringement of the
3 patents-in-suit?

4 A. Yes.

5 Q. Thank you, Mr. Bratic.

6 MS. HENRY: I pass the witness.

7 THE COURT: Cross-examination by the Defendants.

8 MR. RUBENSTEIN: Thank you, Your Honor.

9 THE COURT: You may proceed when you're ready,
10 Mr. Rubenstein.

11 MR. RUBENSTEIN: Thank you, Your Honor.

12 May I approach with a witness notebook?

13 THE COURT: Yes, you may.

14 CROSS-EXAMINATION

15 BY MR. RUBENSTEIN:

16 Q. Good afternoon, Mr. Bratic.

17 A. Good afternoon.

18 Q. Mr. Bratic, you have been present in the courtroom
19 during the trial for all of the last two days, correct?

20 A. Yes.

21 Q. And you have listened to all of the testimony from the
22 witnesses that have come before you; is that right?

23 A. Yes.

24 Q. And you heard the -- the testimony from Dr. Chrissan
25 about the Ericsson source code?

1 A. I did.

2 Q. And you heard that the -- the source code is what runs
3 the base stations.

4 A. I think I had a general understanding of that.

5 Q. Okay. And you heard Dr. Williams testify about how he
6 believes that the Ericsson base stations infringe the three
7 asserted patents?

8 A. Yes.

9 Q. And you heard that Dr. Williams does not have any
10 opinions about infringement by any handsets, correct?

11 A. That I understood.

12 Q. And you understand that Ericsson is the one who makes
13 the base stations that we are here discussing this week.

14 A. That's my understanding.

15 Q. Now, Mr. Bratic, during your work in this case, you
16 actually performed a royalty calculation that is based on
17 the sales of these Ericsson base stations that we've been
18 talking about; isn't that right?

19 A. That's true.

20 Q. And we heard you discuss earlier the Ericsson license
21 with ZTE in connection with your reasonable royalty model?

22 A. Yes.

23 Q. And you understand, don't you, Mr. Bratic, that the
24 Ericsson license with ZTE also includes a royalty rate that
25 is specific to base stations?

1 A. Yes.

2 Q. And in your base station or infrastructure calculation,
3 as you refer to it, you go back to that Ericsson/ZTE
4 license agreement and use that royalty rate that is
5 assigned for base station products, correct?

6 A. Yes, although I called it infrastructure product.

7 Q. And you understand that a base station is an
8 infrastructure product?

9 A. I would say it's included in infrastructure products.

10 Q. And after you take the rate for infrastructure
11 products, you then apply that to actual sales of these base
12 stations made by Ericsson to this customer, T-Mobile, who's
13 in the courtroom today, correct?

14 A. Yes.

15 Q. And when you do that math, you get to a royalty of
16 approximately \$9 million, correct?

17 A. Yes.

18 Q. And you agree -- and you call this -- that calculation
19 your infrastructure calculation?

20 A. Yes.

21 Q. And you agree, Mr. Bratic, that if this case were --
22 were focused only on base stations and it were only
23 Ericsson in the case, your reasonable royalty would be this
24 infrastructure calculation of \$9 million, correct?

25 A. That would have been my understanding.

1 Q. And so if only Ericsson had been at the hypothetical
2 negotiation that you described earlier, the correct amount
3 of damages, in your opinion, is \$9 million, right?

4 A. If only Ericsson had been at the hypothetical
5 negotiation, yes.

6 Q. Right. But in your view, Mr. Bratic, once T-Mobile
7 enters the picture, your royalty jumps more than eight
8 times, from \$9 million to \$77 million; is that correct?

9 A. That's correct.

10 Q. Right. Now, Mr. Bratic, this isn't the first time that
11 you have served in an expert witness capacity on behalf of
12 IV, correct?

13 A. That's correct.

14 Q. And over your history of working with IV, the various
15 firms that you have worked for have billed in excess of
16 \$1 million to IV, correct?

17 A. Yes, sir.

18 Q. Okay. Mr. Bratic, I'd like to ask you a few questions
19 now about your subscriber months royalty model that you
20 took some time to describe earlier. Is that okay?

21 A. Certainly.

22 Q. Great.

23 Now, you agree, don't you, that when using license
24 agreements as a basis for a hypothetical negotiation, you
25 need to assess the technical and economic comparability of

1 those licenses, correct?

2 A. Yes.

3 Q. And you have reviewed the patent license agreements of
4 IV, right?

5 A. I have.

6 Q. And those licenses are portfolio licenses, correct?

7 A. They are.

8 Q. So, in other words, those licenses license many, many
9 more patents than just the three patents asserted in this
10 case.

11 A. Yes.

12 Q. But you recognize, don't you, Mr. Bratic, that the
13 hypothetical negotiation that you described a few minutes
14 ago is only about the three asserted patents.

15 A. That's correct.

16 Q. And, Mr. Bratic, you recognized through your review of
17 IV's license agreements that --

18 MR. RUBENSTEIN: Actually, I'm going to stop
19 myself, Your Honor, because I do believe we need to seal
20 the courtroom at this time. We're getting into some
21 confidential information.

22 THE COURT: All right. Based on counsel's
23 representation and requests, I'll order the courtroom
24 sealed at this time.

25 Those present in the courtroom who are not subject

1 to the protective order entered in this case should excuse
2 themselves until the courtroom is unsealed and the public
3 is invited to return.

4 For the record, the courtroom is sealed.

5 (Courtroom sealed.)

6 (Sealed Portion No. 7 saved in separate sealed
7 transcript.)

8 (Courtroom unsealed.)

9 THE COURT: All right. The courtroom and the
10 record are unsealed. Let's -- let's continue.

11 MR. RUBENSTEIN: Thank you, Your Honor.

12 Q. (By Mr. Rubenstein) Now, Mr. Bratic, after we have
13 this per device royalty of yours of 1 -- \$1.50 -- 56 and a
14 third cents, you divide that by the 24.9 months that you
15 calculated to achieve a -- a royalty rate of 6.3 cents that
16 you talked about earlier, correct?

17 A. Yes.

18 Q. Then you multiply that royalty number by the number of
19 subscriber months that you calculated for T-Mobile's
20 network since the alleged date of first infringement?

21 A. That's right.

22 MR. RUBENSTEIN: May I have Mr. Bratic's Slide 37,
23 please?

24 Q. (By Mr. Rubenstein) And this calculation of subscriber
25 months, Mr. Bratic, took into account subscribers with any

1 LTE phone in the T-Mobile network, correct?

2 A. I'm sorry, I'm not sure what you're asking.

3 Q. When you were calculating the number of subscriber
4 months --

5 A. Yes.

6 Q. -- you -- you made that calculation by looking at all
7 of T-Mobile's subscribers, regardless of what kind of phone
8 they had, correct?

9 A. All LTE subscribers.

10 Q. Yes. Regardless of what kind of phone they had,
11 correct?

12 A. Oh, yes, correct.

13 Q. All right. And you didn't make any attempt to run this
14 calculation without subscribers who were using handsets
15 made by those companies we talked about earlier that had
16 already had a license to IV's patents?

17 A. That's correct.

18 MR. RUBENSTEIN: Okay. May I have Mr. Bratic's
19 slides, please? We need to go to the -- to the very top,
20 please. There we go.

21 Q. (By Mr. Rubenstein) All right. Now, Mr. Bratic, I
22 would hope that you'd agree with me that what I have up
23 here on the screen is an accurate depiction of -- of just
24 the math that you did to get to your reasonable royalty; is
25 that correct?

1 A. Yes, it looks correct.

2 Q. Okay. Now, Mr. Bratic, if hypothetically one of the
3 numbers in this calculation was different, that would
4 change the result, wouldn't it?

5 A. Yes, of course.

6 Q. That's just math, right?

7 A. That's just math.

8 Q. All right. So, hypothetically, let's say that the
9 average price of -- I'm sorry, that the -- that the per
10 device royalty rate was instead of \$5.00, let's say it was
11 \$3.69. If we make that \$3.69, I'm wondering if you're able
12 to confirm for me that just the math that appears on the
13 screen is correct. And is your screen blurry?

14 A. It is.

15 Q. Okay. Well, let me see if we can take care of that.
16 And while we're waiting for that, Mr. Bratic, I have a
17 calculator here for you, if you'd like, to use that to help
18 us with this math.

19 A. Sure.

20 MR. RUBENSTEIN: May I approach, Your Honor?

21 THE COURT: You may.

22 Q. (By Mr. Rubenstein) Okay. Mr. Bratic, so we'll --
23 we'll level set here.

24 The only -- the only number that we've changed on
25 the screen is the very top number, and we've changed it

1 from \$5.00 to \$3.69. And -- and what I'm asking you to
2 confirm for me, please, sir, is that just the math, working
3 through to the bottom is correct.

4 A. I believe so.

5 Q. Okay.

6 A. I'm just eyeballing it --

7 Q. Okay.

8 A. -- and it looks all right.

9 Q. Now -- now, what if, hypothetically, the number of
10 subscriber months that we see down near the very bottom,
11 instead of 1.23 billion was \$325,757,920? Would you
12 confirm for me, please, that just the math on this slide
13 would be correct?

14 A. One second. I'm not sure how to set this computer --
15 this calculator. But eyeball -- excuse me.

16 I'm eyeballing it compared to the last screen, and
17 the math looks like that would be correct --

18 Q. Okay.

19 A. -- mathematically.

20 Q. Right. Now, let's say, Mr. Bratic, that the number
21 that you got from Dr. Chrissan was shown to be too high,
22 and that's that 31.3 number that we have on the screen
23 here; right?

24 A. Okay.

25 Q. Okay. Hypothetically, if that number were to change to

1 15 percent, can you confirm for me that the number at the
2 bottom is correct, just mathematically?

3 A. Yes, I would expect that to be reduced by about half.

4 Q. And if we assume that Dr. Chrissan's apportionment,
5 instead of the original 31.3 was actually 3.13, can you
6 confirm that the number at the bottom is correct?

7 A. Looking at it without doing any calculation, it appears
8 that that would be correct.

9 Q. All right. Now, Mr. Bratic, you would agree with me,
10 wouldn't you, that if the jury disagrees with the opinions
11 of Dr. Williams and Dr. Chrissan, that the damages would be
12 zero?

13 A. I'm not sure what opinions of Dr. Williams you're
14 asking me to assume the jury would disagree with because he
15 had a lot of opinions.

16 Q. Mr. Bratic, you'd agree with me, wouldn't you, that if
17 the jury disagrees with Dr. Williams's opinions about
18 infringement and Dr. Chrissan's inputs to Dr. Williams's
19 opinions on infringement, that the damages would be zero?

20 A. Yes, I would agree if there are -- if there's no
21 finding of infringement, then there are no damages.

22 Q. Now, Mr. Bratic, the last thing is this is a -- a
23 mathematical representation of your infrastructure royalty
24 calculation we talked about at the very beginning, correct?

25 A. It is.

1 Q. Okay. Now, Mr. Bratic, if, again, we simply change
2 Dr. Chrissan's input from 31.3 to 15 percent, that would
3 reduce the royalty to 4.32 million, correct?

4 A. Could you show me the previous slide, please?

5 Q. Yes, sir.

6 A. Okay. That's correct -- I -- I believe that'd be
7 correct.

8 Q. Right. And then if -- if Dr. Chrissan's apportionment
9 were 3.13 percent, just like we looked at with the other
10 one, that would bring it down to a little over \$900,000.00
11 for the royalty, correct?

12 A. I believe so.

13 Q. Mr. Bratic, thank you.

14 MR. RUBENSTEIN: I pass the witness.

15 THE WITNESS: Thank you.

16 THE COURT: Is there redirect, Ms. Henry?

17 MS. HENRY: Briefly, Your Honor.

18 THE COURT: All right.

19 REDIRECT EXAMINATION

20 BY MS. HENRY:

21 Q. Mr. Bratic, Mr. Rubenstein just walked you through
22 quite a bit of math in the last couple of minutes. Do you
23 recall that?

24 A. Yes.

25 Q. And he changed a whole bunch of numbers in your

1 calculations and as a result came out with different
2 damages numbers; is that right?

3 A. Vastly different.

4 Q. Are any of those hypothetical numbers that
5 Mr. Rubenstein added in there, are any of those supported
6 in the record in this case?

7 A. Not in my opinion.

8 Q. Are they going to bring an expert here to tell you that
9 those numbers should be imported into your calculations to
10 lower your rate?

11 A. Of course.

12 Q. Are they going to -- they're going to bring someone
13 here to -- to provide those hypothetical numbers --

14 A. Oh, no. Oh, no. They're going to bring a rebuttal
15 expert, of course.

16 THE COURT: Let's speak one at a time, please.

17 THE WITNESS: Yes, sir.

18 MS. HENRY: I apologize, Your Honor.

19 Q. (By Ms. Henry) Mr. Bratic, what is the period of time
20 for which you've calculated damages?

21 A. It began in June 2014, and it started -- ended on the
22 first day of trial, which is yesterday.

23 Q. So are you --

24 A. Excuse me, February 4th.

25 Q. Excuse me.

1 Are you accounting for the full breadth of
2 infringement all the way through the expiration of the
3 patents-in-suit?

4 A. No.

5 Q. If Ericsson and T-Mobile continued to infringe IV's
6 patents after this week, after the date of this trial,
7 would they then owe even more damages?

8 A. They would.

9 Q. Okay. Now, Mr. Bratic, Mr. Rubenstein spoke with you
10 about something he called the base station rate. Do you
11 recall that?

12 A. I do.

13 Q. Okay. And -- and he asked you some hypothetical
14 questions about, well, what if T-Mobile weren't in the
15 room. Do you recall that?

16 A. I do.

17 Q. Okay. Is it important that T-Mobile was in that
18 hypothetical negotiation room?

19 A. Based on my understanding of the allegation of how
20 infringement occurs in this case, yes.

21 Q. And does the value of T-Mobile's use of these patents,
22 does that factor into the hypothetical negotiation?

23 A. It's the core of the hypothetical negotiation.

24 Q. Do you believe that it would be appropriate to base
25 damages on this case solely on the value of the base

1 stations themselves?

2 A. No, not at all.

3 Q. Why not?

4 A. Well, because T-Mobile is accused of being a direct
5 infringer of these 10 method claims of the three
6 patents-in-suit. They provisioned a very large LTE network
7 that operates in a very efficient manner, enabling them to
8 provide LTE wireless services to millions of customers
9 going back to June of 2014. They've made extensive use of
10 their network. Their customers have enjoyed improved
11 quality of service. They've improved their profitability
12 significantly. They've saved lots of money and avoided
13 capital investment in infrastructure. And all that would
14 be reflected in the extent of use made of the
15 patents-in-suit by T-Mobile as a direct infringer, which is
16 separate and apart from anything Ericsson did when it sold
17 the equipment that allowed T-Mobile to become the direct
18 infringer.

19 Q. Do any of the value that T-Mobile -- excuse me, I'm
20 going to -- I'm going to rephrase that question.

21 Does the value that T-Mobile reaped from the use
22 of these patents-in-suit, is that -- is that included
23 simply in the price they pay for the base station?

24 A. No, not at all.

25 Q. Did you walk the jury through some documents that prove

1 that?

2 A. Yes.

3 Q. Mr. Rubenstein also talked about the fact that
4 Ericsson's licenses that you walked through are a per
5 handset rate. Do you recall that?

6 A. Yes.

7 Q. Why do you believe that a per handset rate -- excuse
8 me, first, do you believe that a per handset rate is
9 appropriate?

10 A. Well, no, but -- no.

11 Q. Why not?

12 A. Well, the handsets themselves don't infringe, but what
13 the handsets do is they enable T-Mobile's LTE subscribers
14 who have an LTE handset -- pretend this is a handset. I
15 wasn't allowed to bring mine into court. You can pretend
16 this is a handset, and it's an LTE handset.

17 When an LTE customer of T-Mobile has one of these
18 devices, they access that infringing LTE network, and they
19 enjoy that quality of service.

20 T-Mobile gets all kinds of other benefits as a
21 result of that customer being connected to that network.
22 You, therefore, have to look at the nature of the network,
23 the extent of use of the network, and all the benefits
24 flowing from that infringing network to determine the
25 reasonable royalty.

1 Q. You were also asked some questions about the fact that
2 there are several manufacturers of handsets. And when we
3 say handsets, are we talking about phones and tablets and
4 other types of mobile devices?

5 A. Yes, correct.

6 Q. Thank you. You were asked some questions about the
7 fact that the manufacturers of many of those handsets are
8 licensed to IV. Do you recall that?

9 A. Yes.

10 Q. And I believe you said that you didn't think that was
11 relevant in your analysis?

12 A. It's not.

13 Q. Why not?

14 A. Because the handsets themselves don't infringe.

15 Q. Can you elaborate on that?

16 A. Well, as I said earlier, yes, I'm happy to explain.

17 The handsets don't -- as I understand from Dr. Williams's
18 analysis, the handsets themselves don't infringe, but it's
19 the LTE network, the T-Mobile LTE network, wireless network
20 that does infringe. Those handsets just enable customers
21 to access that infringing network.

22 Whether those handsets are licensed already by IV
23 or not has nothing to do with it because they are not part
24 of the royalty base.

25 Q. Mr. Bratic, I have two more questions for you.

1 The first, who picked the 18 U.S. patents to chart
2 and provide to ZTE in those negotiations?

3 A. Ericsson did.

4 Q. And who called those representative?

5 A. I'm sorry?

6 Q. And who called those representative patents?

7 A. Ms. Chen.

8 MS. HENRY: Thank you, Your Honor. No further
9 questions. I pass the witness.

10 THE COURT: Additional cross-examination,
11 Mr. Rubenstein?

12 MR. RUBENSTEIN: Just briefly, Your Honor.

13 THE COURT: Proceed.

14 | RECROSS-EXAMINATION

15 | BY MR. RUBENSTEIN:

16 Q. Now, Mr. Bratic, you heard Dr. Williams earlier today
17 give his testimony about all of the claims asserted in
18 these three patents being directed at the operation of the
19 base station, correct?

20 A. In part.

21 Q. You were here for his testimony, right?

22 A. I heard that testimony. I'm saying it's part of the
23 testimony I heard.

24 Q. Right. So you -- you heard Dr. Williams describe that
25 the claims in the asserted patents are -- are directed at

1 the operation of the base stations, correct?

2 A. I'm not sure I heard exactly that.

3 Q. All right. Did -- you heard Dr. Williams run through
4 his -- run through his checklist and, you know, go through
5 and see -- you know, give us his opinion about how the base
6 station, in his view, meets all of those claims, correct?

7 A. That was my general understanding.

8 MR. RUBENSTEIN: Pass the witness, Your Honor.

9 THE COURT: Redirect?

10 REDIRECT EXAMINATION

11 BY MS. HENRY:

12 Q. Mr. Bratic, I'm told I misstated earlier with a couple
13 of exhibits. Can you confirm whether or not the Verizon
14 exhibit is -- excuse me, the Verizon license is PTX-262?

15 A. Let me see if I can find PTX-262. There you go. Thank
16 you. Let me look at that. Yes.

17 Q. And can you confirm that the set of claim charts that
18 were provided to ZTE are at PTX-335?

19 A. Yes.

20 Q. And -- and a part of the exhibit --

21 A. Oh, I'm sorry. Those are the price -- reference price
22 sheets.

23 Q. Oh, I apologize.

24 MS. HENRY: Can we please take those off the
25 screen?

1 Q. (By Mr. Henry) And can you confirm for me that some of
2 the documents that were used in your analysis are -- for
3 your calculations were PTX-49, 58, and 52 through 57? I
4 believe we failed to read those into the record. They were
5 represented on your slides.

6 A. I'm sorry, could you just repeat that one more time?

7 Q. Yes. I'm sorry. PTX-49 --

8 A. Hold on one second. I'm looking at them individually.

9 Yes, 49.

10 Q. PTX-58?

11 A. Yes.

12 Q. And PTX-52 through 57?

13 A. I'm sorry, what range?

14 Q. PTX-52 through 57?

15 A. Yes.

16 MS. HENRY: No further questions.

17 THE COURT: Additional cross-examination?

18 MR. RUBENSTEIN: Nothing further, Your Honor.

19 THE COURT: All right. Mr. Bratic, you may step
20 down.

21 THE WITNESS: Thank you, Your Honor.

22 THE COURT: Ladies and gentlemen, we're going to
23 recess for the evening at this point.

24 I'm sorry we've stayed as late as we have, but I
25 think you can understand with a lengthy witness like this,

1 it's hard to stop and start.

2 I'm going to ask you to leave your juror notebooks
3 closed on the table in the jury room as you leave for the
4 evening.

5 I'll remind you to follow all my instructions,
6 including not to discuss the case with anyone. I'd like to
7 have you back tomorrow morning just like you were this
8 morning. We'll try to start as close to 8:30 as we can.
9 Travel safely to your homes. Have a good evening.

10 And the jury is excused at this time.

11 COURT SECURITY OFFICER: All rise.

12 (Jury out.)

13 THE COURT: All right. Be seated, please.

14 Counsel, I have looked at what you've previously
15 submitted as a jointly proposed final jury instruction and
16 verdict form. I believe the Court would benefit by an
17 updated revision of those documents in light of where we
18 are in the case as of now.

19 I'm going to order that the parties jointly submit
20 a revised and updated proposed final jury instruction and
21 verdict form by 5:00 o'clock p.m. tomorrow. That's
22 Wednesday. And you should submit it in both Word form
23 and -- Word format and a PDF format.

24 Also, make sure that any competing proposals
25 included therein where you don't agree are clearly

1 distinguishable.

2 I would suggest a different font for one person or
3 shading or something so that it's readily discernible by
4 the Court where you diverge. And, again, this is a single
5 joint submission of a revised and updated final jury
6 instruction and verdict form.

7 All right. With that, are there any questions
8 before we recess for the evening?

9 MR. WARD: Your Honor, may Mr. Bratic be finally
10 excused?

11 THE COURT: Any objection from Defendants?

12 MR. RUBENSTEIN: No, Your Honor.

13 THE COURT: All right. Mr. Bratic is excused.

14 MR. WARD: Nothing else from Plaintiff.

15 THE COURT: Anything else from Defendants?

16 MR. KUBEHL: No, Your Honor.

17 THE COURT: We stand in recess until tomorrow
18 morning.

19 COURT SECURITY OFFICER: All rise.

20 (Recess.)

21

22

23

24

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CERTIFICATION

3 I HEREBY CERTIFY that the foregoing is a true and
4 correct transcript from the stenographic notes of the
5 proceedings in the above-entitled matter to the best of my
6 ability.

9 /S/ Shelly Holmes
10 SHELLY HOLMES, CSR, TCRR
OFFICIAL REPORTER
11 State of Texas No.: 7804
Expiration Date: 12/31/20

2/5/19
Date